Benefit incidence of health services in Ghana and access factors influencing benefit distribution

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BENEFIT INCIDENCE OF HEALTH SERVICES IN

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GHANA AND ACCESS FACTORS INFLUENCING BENEFIT DISTRIBUTION

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Abbreviations

ALOS - Average length of stay

ANC - Antenatal care

APHRC - African Population and Health Research Centre

ARI- Acute respiratory infections

ART - Anti-retroviral therapy

BI - Benefit incidence

BIA- Benefit incidence analysis

BMC - Budget Management Committee

CBHIS - Community Based Health Insurance Schemes

CHAG - Christian Health Association of Ghana

CHIM - Centre for Health Information Management

CHO - Community Health Officer

CHPS - Community Health Planning Services

CWC - Child Welfare Clinic

CWIQ - Core Welfare Indicator Survey

DCE - District Chief Executive

DDHA - District Director of Health Administration

DFID - Department for International Development

DHA - District Health Assembly

DHK- Dangbme Hewaminami Kpee (Dangbme Good Health Association)

DHRC - Dangme West Health Research Centre

DHS - Demographic and Health Survey

DMHIS - District mutual health insurance scheme

EA- Enumeration Area

EDL - Essential drug list

FGD - Focus group discussion

GDP - Gross Domestic Product

GETFUND - The Ghana Educational Trust Fund

GHS - Ghana Health Service

GLSS - Ghana Living Standards Survey

GOG - Government of Ghana

GPRS - Ghana Poverty Reduction Strategy

GPRTU - Ghana Private Road Transport Union

GSS - Ghana Statistical Service

GWEP - Guinea Worm Eradiation Programme

HH - Household

HIRD - High Impact Rapid Delivery

HIV/AIDs - Human Immune Virus/Acquired Immune Deficiency Syndrome

IDI - In-depth interview

IGF - Internally generate fund

IMCI- Integrated Management of Childhood Illness

IMF - International monetary Fund

IP - Inpatient

IPD - Inpatient Day

ITN - Insecticide Treated Net

KATH-Komfo Anokye Teaching Hospital

KII - Key Informants Interview

LEAP - Livelihood Empowerment Against Poverty

LMIC - Low-and middle- income countries

LSMS - Living Standards Measurement Survey

MCH - Maternal and Child Health

MDA - Ministries, Departments and Agencies

MDG - Millennium Development Goal

MMT - Metro Mass Transport

MOH- Ministry of Health

NGO - Non Governmental Organization

NHI - National Health Insurance

NHIC - National Health Insurance Council

NHIF - National Health Insurance Fund

NHIS - National Health Insurance Scheme

NHS - National Health Service

OLS - Ordinary Least Squares

OOP - Out-of-pocket payments

OPD - Outpatient department

OPV- Outpatient Visit

PCA - Principal Component Analysis

PHC - Primary Health Care

POW- Programme Of Work

PPME - Policy Planning Monitoring And Evaluation

PSU - Primary Sampling Units

RCH - Reproductive and Child Health

RDD - Research and Development Division

REC - Research Ethics Committee

RHA- Regional Health Administration

SAH - Self assessed health status

SES- Socio-economic status

SFP- School Feeding Programme

SHIELD - Strategies for Health Insurance Equity In less Developed Countries

SSNIT- Social Security and National Insurance Trust

TBA -Traditional birth attendant

TB - Tuberculosis

TDR - Tropical Diseases Research

TI - Training Institution

UNICEF - United Nations Children's Fund

USAID - United States Agency for International Development

VCT - Voluntary Counselling and Testing

WB - World Bank

WHO - World Health Organization

ABSTRACT

Introduction: Universal coverage is built around financial protection and access to needed care for all members of the society. The main focus in many countries, including Ghana, has been on financial protection. However removing financial barriers does not necessarily remove other access barriers to the use of health care services. The extent to which a population gains access to health care depends on a multiplicity of factors.

Aim The study investigated the distribution of health care benefits across socio-economic groups, assessed if these benefits are distributed according to need and identified health system and community access factors that influence the distribution of benefits from using health care services in Ghana, in order to identify policy options for promoting equitable access to and use of health services in Ghana.

Methodology: The study is a cross sectional study and employed both quantitative and qualitative methods. These included a household survey, secondary data, focus group discussions, in-depth interviews and client narratives.

Results: Overall, health care benefits from using services are pro-rich with the exception of public inpatient care at the district hospital level. Outpatient care is more evenly distributed at the primary care levels. Benefit distribution is highly pro-rich for public inpatient care at regional and teaching hospitals and in the private sector. Distribution patterns show that benefits are not distributed according to need.

Key access barriers include direct and indirect costs of seeking care, especially travel time and cost, which particularly affect poor rural populations. Organizational factors such as availability of staff and equipment, unpredictability of opening hours and poor staff attitudes deter use. Informational factors, especially on the National Health Insurance Scheme, also act as barriers to use.

Conclusion and recommendation: Distribution of health care benefits in Ghana is inequitable. There is a need to tackle the full range of access barriers if Ghana is to progress towards universal coverage.

EXECUTIVE SUMMARY

Universal coverage is currently on top of the global health system agenda (The Rockefeller Foundation 2010; WHO 2010). Universal coverage is defined as access for all to appropriate health services at an affordable cost and is associated with better health and equity as well as financial protection (Evans 2005; WHO 2008) This definition implies that universal coverage has two key elements: financial protection and access to needed health care.

Ghana has seen a number of changes in health care financing policy since independence, at which point health services were largely tax funded. In the 1980s, Ghana like other developing countries experienced an economic down-turn; government revenue declined and Ghana had to turn to the World Bank and IMF for assistance. This resulted in charging high user charges in public health facilities. The repercussions of this resulted in the introduction of the exemption policy, which exempted specific disease categories and the poor from paying for health care services in public facilities. Unfortunately this policy was not effective (Garshong 2002). Inequities exist in Ghana, with differences in health status and health service delivery between and within regions, rural and urban dwellers and different socioeconomic groups (GSS 2008).

Ghana's domestic economy comprises of mainly subsistence agriculture and it is classified as a low-income country (Agyepong 2008). The country has experienced some economic progress over the past decade or more and national poverty rates have declined. Several new social policies have been embarked upon by recent governments, with the aim of enhancing the lives of Ghanaians including through improved health status. The government introduced a National Health Insurance Scheme (NHIS) in 2004 to promote financial protection and access to health care for all Ghanaians. This is a laudable idea and in consonance with the global agenda on universal coverage.

Five years after the introduction of the NHIS, it is an opportune time to assess which population groups in Ghana are benefiting from the use of health services and if health care benefits are distributed according to need.

This is the key focus of this study, along with assessing the access factors that contribute to benefit incidence patterns in Ghana.

It is a cross-sectional study and employed mixed methods (i.e. both quantitative and qualitative methods). A household survey was conducted in six districts and secondary data was collected from health facilities and at the national level. The quantitative component of the study measured health care benefits across socioeconomic groups. Benefits were calculated by multiplying utilization rates by unit cost of each type of service (McIntyre and Ataguba 2010). Secondary data at the national level was used in estimating unit cost of public sector health care services at different levels. Utilization data was drawn from the household survey. In this study, the utilization rate based on all visits, rather than simply a single visit, during the recall period of one month for outpatient care and one year for inpatient care.

Benefits were disaggregated by level of care and presented as a percentage share of total benefit to each socio-economic quintile. The analysis considers the distribution of benefits of socio-economic groups by primary level care and hospital care. Additionally, the distribution of inpatient and outpatient care benefits was assessed at the district, regional and teaching hospital levels. Regional and teaching hospital benefits were combined due to low utilization numbers at these levels. The study did not only measure benefits from using public health care services but also measured benefits from using both public and private sector services. It also measured the use of two maternal health care services, i.e. antenatal care and delivery services, across socio-economic quintiles. The study also assessed the need for health care services using self-assessed health status.

Qualitative data was collected using focus group discussions with community members, in-depth interviews with health care providers and case studies with clients who have recently used health care services. They explored likely reasons for benefit incidence patterns in relation to factors that facilitate or impede access to health care.

The findings showed that, within the public sector overall, the rich benefit more than the poor for outpatient care at all levels of care. Though outpatient care is more evenly distributed at the primary care level, benefits are still pro-rich. The rich gained more

than the poor when it comes to public inpatient care at regional and teaching hospitals. However public inpatient care at the district level is pro-poor. On the whole, the middle-income group gained the most at all public sector service levels in Ghana. These results are similar to other low- and middle-income countries.

Within the private sector, the richest gained the most benefits. Private sector inpatient care is highly pro-rich with the richest quintile gaining almost 50% of all inpatient benefits whilst the poorest gained 6%. The only privately provided service used more by the poor is that of home remedies.

Results from the system-wide benefit incidence analysis (BIA), which includes the use of both public and private health sector health services, showed that the poor gained even less as compared to the public BIA. Benefits accruing to the poorest quintile decreased from 14% in the public BIA analysis to about 12.7% in the system-wide analysis. Concentration curves for both outpatient and inpatient care in the system-wide BIA lie below the 45 degree line with positive concentration indices.

The study also showed that insured clients benefit more from health care services and used health care three times more than those without insurance cover.

Utilization of two key maternal health services (ANC and delivery services) showed that ANC services were used by all Ghanaians, however delivery at home delivery is pro-poor. The richest groups mainly deliver in health care facilities both in the public and private sectors.

On the whole, benefits are not distributed relative to need. There is an inverse distribution of benefits and need, which is known as the 'inverse care law' (Hart 1971). Equity in service use is most frequently defined as use according to need for health care. The fact that the poor benefit less relative to their need whilst the richest gain more benefits relative to their need indicates the existence of inequities in the Ghanaian health care system. This is despite the introduction of the new financing policy, which has reduced the financial barrier to accessing health care services. However, reducing financial barriers alone will not necessarily guarantee access to

health care services by all groups (Abel-Smith and Rawal 1992; O'Donnell 2007; Ansah, Narh-Bana et al. 2009).

This point was reflected in the qualitative component of the study, which showed that various barriers exist in accessing health care services in the country. The direct cost of services, for instance charges for consultation, diagnostics and drugs, are often beyond the reach of many, particularly the poor in rural areas. Indirect costs in terms of travel and waiting time also act as barriers to the use of health care service. Ability to pay for services is limited, particularly for rural farmers whose household resources are dependent on the weather and a readily available market for their product. Though coping mechanisms exist, such as borrowing, the repercussions can be devastating and impoverish already vulnerable families.

Even though insured clients are protected from out-of-pocket payments, they are still faced with transport costs and there are services that are not covered and insured clients have to pay for these services. Besides, there remain areas where there is a lack of clarity in the operation of the NHIS for both clients and providers, particularly in terms of whether or not payment is required for some services. A key challenge is that many Ghanaians are not yet covered by the NHIS; the never-ending cycle of poverty makes membership difficult for some, particularly those outside the formal sector. Studies in Ghana have cited unaffordable premiums and registration fees as an important reason for non-membership by many in the informal sector (Sulzbach, Garshong et al. 2005; Mensah 2009; Witter 2009; Akazili 2010).

Long distances between health facilities and communities are a major access barrier for both clients and providers. Organizational factors such as the range of services offered, staff mix, frequent referrals by primary facilities, unpredictable opening hours and long waiting time also impede use of health care services. Further, negative staff attitudes are a barrier to service use for clients.

The introduction of the NHIS has substantially increased patient numbers and without a corresponding increase in staff numbers has increased the staff workload; in these circumstances and with few incentives, it makes it difficult for staff to give of their best.

Inadequate information on the operation of the NHIS and delays in NHI claim reimbursements to health facilities have led to threats by some facilities to discontinue providing services to insured clients.

These findings show that community and provider access factors that contribute to benefit incidence patterns are multifaceted and interlinked. To date, the focus in universal coverage reforms has been on providing financial protection. However, universal coverage also requires access to needed health care services by all (Carrin, Mathauer et al. 2008; WHO 2008; Garret, Mushtaque et al. 2009; McIntyre 2010; Yates 2010), which requires a combination of mechanisms of improving health care financing and service provision.

This study has demonstrated that having insurance cover gives benefits particularly through increased utilization of health services, but equity of access as envisaged in this study requires benefit from the use of services to be distributed according to need. However, those who need services most are those who face the most daunting access challenges. The key challenge therefore is to tackle the full range of access barriers, and not only to provide financial protection.

Nevertheless, ways must be found to bring more of those outside the formal sector into the NHIS. Government's plan to initiate a one-time payment for the informal sector, and effectively funding most of their health care requirements from tax revenue, (Witter 2009; NHIS 2010; WHO/TDR 2010) will expand financial protection coverage.

However, there should be complementary policy interventions to remove other access barriers such as improving primary and district hospital care (as these levels of care can address most health problems faced by Ghanaians and are the least pro-rich services at present), addressing geographical access challenges, improving staffing levels and their distribution, engagement with staff to address poor attitudes and tackling informational barriers for Ghana to make further progress towards universal coverage.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

Universal coverage is currently on top of the global health system agenda (The Rockefeller Foundation 2010; WHO 2010). Universal coverage was the agenda of the recent first Global Symposium on Health Systems Research. The main focus was on accelerating universal coverage in countries. This agenda is supported by the World Health Organization (WHO) and other development institutions across the globe. Universal coverage is defined as access for all to appropriate health services at an affordable cost and is associated with better health and equity as well as financial protection (WHO 2008) This definition implies that universal coverage necessitates two key concerns: financial protection and access to needed care.

1.1 Ghana and universal coverage

Ghana has gone through a history of various health care financing mechanisms. A hospital fee system was in operation in Ghana before independence. After independence, health services were funded mainly from tax revenue (Dakpallah 1988). In the 1980s, Ghana like other developing countries experienced economic down-turn and government could no longer fund health care at the level it previously did and had to turn to the World Bank and IMF for assistance. A conditionality attached to the assistance was the introduction of user fees in all public health care facilities. These fees were considerable and affected the population significantly. Poorer population groups who were unable to pay for hospital fees were detained until they paid. There was a significant drop in utilization of health care in the country (Garshong 2002).

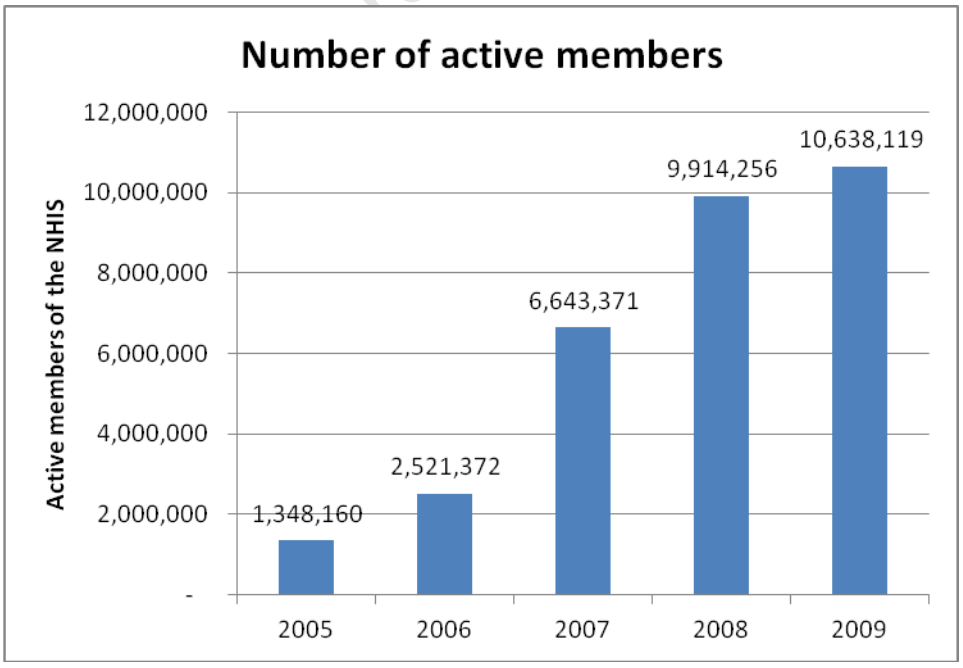
Following the negative effects of the user fees, also known as 'cash and carry' in Ghana, the government introduced an exemptions policy which exempted selected user groups such as children under five, pregnant women, the elderly (70 years and above) and indigents from paying fees in public health care facilities. Some specific diseases of public health concern such as Tuberculosis (TB), snake-bite and yaws, among others were also exempted.

The exemptions policy was introduced to assist the poor and other vulnerable groups in accessing care. However, it was beset with implementation problems and was unable to achieve its aim (Garshong 2002). Consequently, the 1990s saw the emergence of Community Based Health Insurance Schemes (CBHIS) in poor rural districts and in mission health care facilities but these covered only about 1% of Ghanaians (Atim, Grey et al. 2002). To provide financial protection to more of the population, the government introduced the Ghana National Health Insurance Scheme (NHIS) in 2004.

This new financing mechanism was implemented by government as an alternative to user charges. It aims not just to be a pro-poor policy but to achieve "equitable and universal access for all residents of Ghana to an acceptable quality package of essential healthcare" (MOH 2002). It seeks to remove financial barriers to health care and to protect citizens from catastrophic health expenditures (GHS 2007).

The objective of the NHIS was to ensure universal access to health care for all Ghanaians. This is in line with the goal of universal coverage. Below is a graph showing NHI coverage from the inception of NHIS to 2009. This study was undertaken in 2008.

Figure 1.0 NHIS coverage from 2005-2009



Source: NHIS 2010

Formal sector workers are covered through automatic deductions from their social security contributions to the national health insurance fund on a monthly basis whilst informal sector workers pay a minimum of about $8 per year to enjoy coverage (Agyepong 2008).

Currently, however, there are many Ghanaians who have not registered and paid a premium and therefore are not enjoying the financial protection envisaged by the NHIS (Mensah 2009). These groups are in the informal sector who have not been willing or able to pay registration fees and premiums to become members of the scheme.

1.2 Rationale for the study

With this new health care financing mechanism operating since 2004, it is an opportune time to assess the distribution of benefits from using health care within the context of the NHIS from an equity perspective. The study was based on work I did as part of the SHIELD project. This is further explained in the methods chapter of this thesis. This study is not trying to assess if the NHIS has improved benefit incidence as it is not a longitudinal study, but rather it looks at benefit incidence in the context of the NHIS having been introduced a few years ago and to It tries to identify issues relating to access and to the use of health care services that may be important for the NHIS and the Ministry of Health (MOH) and the Ghana Health Service (GHS) to take into account if Ghana is to achieve universal coverage.

In general, policy makers have almost exclusively focused on financial protection issues and research has recently been conducted on financial protection in Ghana (Akazili 2010). In contrast, access to and use of health services has been left in the background.

Universal coverage in health care entails financial protection for all and access to needed health care for all, irrespective of social standing (Evans 2005). The question now is whether people in Ghana are accessing needed care and if the use of services is equitable or not. Access to needed care is of particular concern because the focus in

reforms has often been on the funding side of things and not as much on delivery and access issues.

The focus of this study is not only looking at the NHIS as a financing mechanism but the challenges that face the MOH/GHS the sector that is responsible for organizing the provision of health care services in Ghana and for regulating private providers so that services which the NHIS purchases from these providers can be equitably accessed and used.

To assess who is benefiting from the use of health care services, the benefit incidence methodology is employed (Castro-Leal, Dayton et al. 2000; Demery 2000; Davoodi 2003; Sabir 2003). The only known benefit incidence study in Ghana was by Demery (1995) over fifteen years ago, on the incidence of social spending in health and education. The study found that Ghana was among countries with inequities in the distribution of health care service use, such that the richest gain far more from public health care subsidies than the poorest (Demery, Chao et al. 1995).

Similar to other previous BIA studies, Demery's (1995) study only looked at the distribution of health care services provided by the public sector and not the entire health system. It also did not assess whether benefits are distributed according to need. Finally, it did not explore access factors that contribute to the inequitable distribution of health service benefits.

This study therefore is focused on how the benefits from the utilization of health care services are distributed across socio-economic groups. It also assesses the distribution of benefits relative to need for health care. The study assesses the distribution of benefits across the whole health system and not the public sector alone. It goes further and explores access factors underlying the distribution of benefit incidence patterns in Ghana.

Because this study goes further than previous benefit incidence analyses, in that it not only focuses on the benefits from using public sector health services but also those arising from the use of private sector services, some may argue that different terminology should be used. However, the fundamental notion underlying benefit

incidence is that it takes account not only of the use of different types of health services, but also the different unit costs of each type of service.

Thus, it is not simply a 'utilisation incidence' analysis; instead it weights utilisation for the differential unit cost of different categories of services, which internationally has been termed 'benefits' of using services. This reflects an implicit assumption that the benefits of using a service at a tertiary facility are greater than those at a primary care facility, given the greater resource intensity in providing services in higher level facilities.

Similarly, differences in unit costs of similar services across the public and private health sectors will reflect in differences in the benefits of using health services in these sectors. Given that the public sector is so under-resourced in Ghana and many other low- and middle-income countries, there is likely to be a quality of care difference between public and private sectors, which is why it is appropriate to weight the use of services in these two sectors according to their cost.

For these reasons, I have chosen to refer to the analysis presented in this thesis as a benefit incidence analysis. The only element that is not in the form of a benefit incidence analysis is the analysis of maternal health care services. This is more appropriately termed a utilisation incidence analysis as it is based purely on the use of these services and is not weighted for unit costs as these unit costs do not vary.

At the same time that universal coverage is high on the health system agenda, the Millennium Development Goals (MDGs) are also of considerable importance. A key MDG focus in Ghana is to try to reduce the maternal mortality rate. For this reason, in addition to considering the distribution of overall health system benefits, it is important to consider some specific services that can contribute to reducing maternal mortality rates, such as institutional deliveries. The study therefore looks at the utilization incidence of two key maternal health care services, ANC and deliveries.

1.3 Research questions

The research questions of the study therefore are:

1. Who, in terms of socio-economic status, is benefiting from the use of public health care spending in Ghana?
2. Who is benefiting from the use of health care service in the entire health system (public and private) in Ghana?
3. Are health care benefits distributed according to need?
4. Is the use of maternal health care services distributed according to need?
5. What are the community factors that facilitate or impede access to health care services?
6. What are the health system factors that facilitate or impede access to health care services?

1.4 Aim

To investigate the distribution of health care benefits across socio-economic groups, assess if these benefits are distributed according to need and to identify health system and community factors that influence the distribution of benefits in Ghana to identify policy options for promoting equitable access to and use of health services in Ghana.

1.4.1 Specific Objectives

The specific objectives are:

1. To quantify and analyze benefits from the use of health care services in both the public and private health care sectors across socio-economic groups in Ghana.
2. To assess equity in the distribution of these benefits across socio economic groups relative to the needs of each group.
3. To quantify the distribution of utilization of maternal health services across different socio-economic groups in Ghana with reference to:
    a. ANC services.
    b. Delivery services.

4. To evaluate a wide range of access factors, both from the perspective of the provider and the community, that impede or facilitate the use of health facilities across socio-economic groups in Ghana.
5. To make recommendations for promoting an equitable distribution of health service benefits in Ghana.

1.5 Summary

After this introduction which provides the rationale and objectives of the study, Chapter 2 gives an overview of the health system in Ghana and the equity challenges it faces. It also highlights the economic profile of the country and new social policies of the government that are intended to address inequities within the country.

Chapter Three reviews the international literature on equity in health, and health care need and how these are measured. It also highlights how benefit incidence has been measured in the past in different countries, especially in low- and middle-income countries. It also focuses on the concept of access and its dimensions. It provides a conceptual framework for later analysis, based on the literature reviewed.

Chapter Four outlines the detailed qualitative and quantitative methodologies used in the study. It includes a description of the study site, sampling and data collection and challenges encountered during fieldwork. Data analysis methods, ethical clearance and the limitations of the study are also highlighted.

Chapter Five presents the key quantitative findings on the cost of various health care services. This is followed by results of the benefit incidence of public health spending and for the overall system (public and private) across socioeconomic groups. It also provides a comparison of the distribution of benefits and need, and finally, the utilization of two key maternal health services among population groups is analysed.

The qualitative findings on access factors are detailed in Chapter Six. It explores community and service factors that facilitate and hinder use of health care services. Chapter Seven discusses the findings and Chapter Eight presents the conclusions, recommendations and areas for further research.

CHAPTER TWO

A PROFILE OF GHANA AND THE HEALTH CARE SYSTEM

2. 0 Introduction

This chapter provides an overview of Ghana and the context within which the study is conducted. It highlights Ghana's geography, population, politics and the economy. It further covers the poverty profile of the country and social policies to tackle some of these problems. The chapter then provides a historical overview of the country's movement from fragmentation to universalism within the context of its health system challenges.

2. 1 Geography

Ghana is located on the west coast of Africa and is bordered by French speaking countries, Togo to the east, Burkina Faso to the north and Côte d'Ivoire to the west, while the southern part of Ghana is on the Gulf of Guinea. Ghana is divided into three main ecological zones, the savannah north, the tropical and forested middle zone and the southern coastal belt. It has two main climatic seasons, the rainy season which extends from March to September and the dry season, from December to March (Ghana Statistical Service 2008). The Northern region has one rainy season in a year, whilst the rest of the country has two rainy seasons within a year. This affects farmers in the north and limits their agricultural activities and income.

2. 2 Population

Ghana's population has increased from 6.7 million in 1960 to 18.9 million in 2000 and is estimated to be about 23 million currently. Approximately 44% of Ghana's population lives in urban localities with a population of 5,000 or more. It has an average annual population growth rate of 2.7%, the population density per square kilometer is 79 and the population under 15 years was 41% in 2000. Life expectancy for males was 55 years and 60 years for females in 2000 (Ghana Statistical Service 2008).

2. 3 Politics

British rule over the Gold Coast, now Ghana, began in 1820. Ghana was the first country south of the Sahara to achieve independence from British rule on March 6, (Ghana Statistical Service 2008) 1957 and became a republic on July 1, 1960 (Ghana Statistical Service 2008. The first President was Dr. Kwame Nkrumah. He was overthrown by a military coup in 1966. Thereafter a series of military coups followed from the late 60s to the early 1990s with short spells of civilian administrations.

Since the early 1990s, Ghanaians have voted in democratically elected governments. Ghana currently has two predominant political parties though there are other smaller parties. One of the larger parties has a following in the poorer regions in the north and among other poorer localities whilst the other tends to be more popular among the middle and southern belts with better economic fortunes and in urban areas (Agyepong 2008).

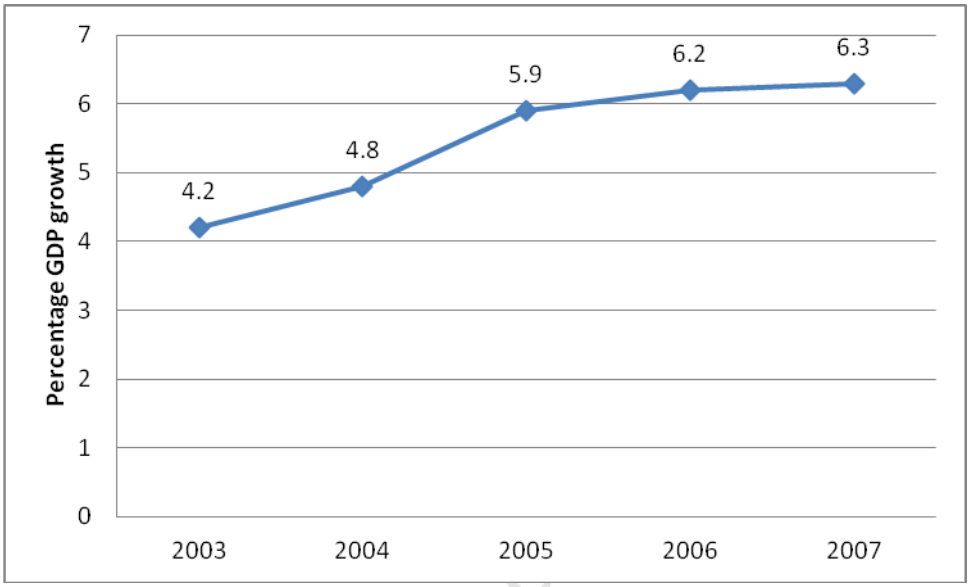
Ghana has ten administrative regions with a Minister who represents the President at the regional level, and 138 districts with a District Chief Executive (DCE) who is nominated by the President and approved by members of the District Assembly at district level. The administrative capital is Accra with a population of 2,825,800. Other large cities are Kumasi and Tamale. English is the official language. Various local languages exist; the main languages are Twi, Ga, Ewe and Dagomba-Moshie. Christianity is the main religion accounting for 63% of the population, with indigenous beliefs accounting for 21%, and Islam for 16%. Ghana is a member of the Commonwealth of Nations (Ghana Statistical Service 2008).

2. 4 Economy

Ghana's domestic economy comprises of mainly subsistence agriculture and it is classified as a lower middle-income country (World Bank 2011) Ghana is the world's second largest producer of cocoa and exports several agricultural products including cocoa, coffee, cola and timber. Its natural resources include gold, timber, diamonds, bauxite, manganese, rubber, silver, salt and limestone and recently discovered oil. Ghana's industry includes mining, lumber, light manufacturing, aluminium smelting and food processing. It has a large informal sector with about 60% of its population involved in agriculture, 15% in industry and about 25% in

services. Agriculture is an important sector of Ghana's economy contributing 34% of Gross Domestic Product (GDP). Ghana remains dependent on international financial and technical assistance (Ghana Statistical Service 2008). Ghana has seen some economic growth in the last ten years. The figure below shows Gross Domestic Product (GDP) growth since 2003. The reason for this has not been documented.

Figure 2. 1 Percentage real GDP growth in Ghana from 2003-2007



Source: (GSS 2008).

The Demographic and Health Survey (DHS) (2008) reports that about 78% of men and 75% of women are currently employed. About 30% of women and 41% of men work in the agricultural sector. With the majority of the population engaged in subsistence agriculture, climatic conditions are of considerable importance in Ghana. Harvests are unpredictable and agricultural prices are low leading to low and erratic income for many rural families (Amorim 2004).

2.5 Poverty trends in Ghana

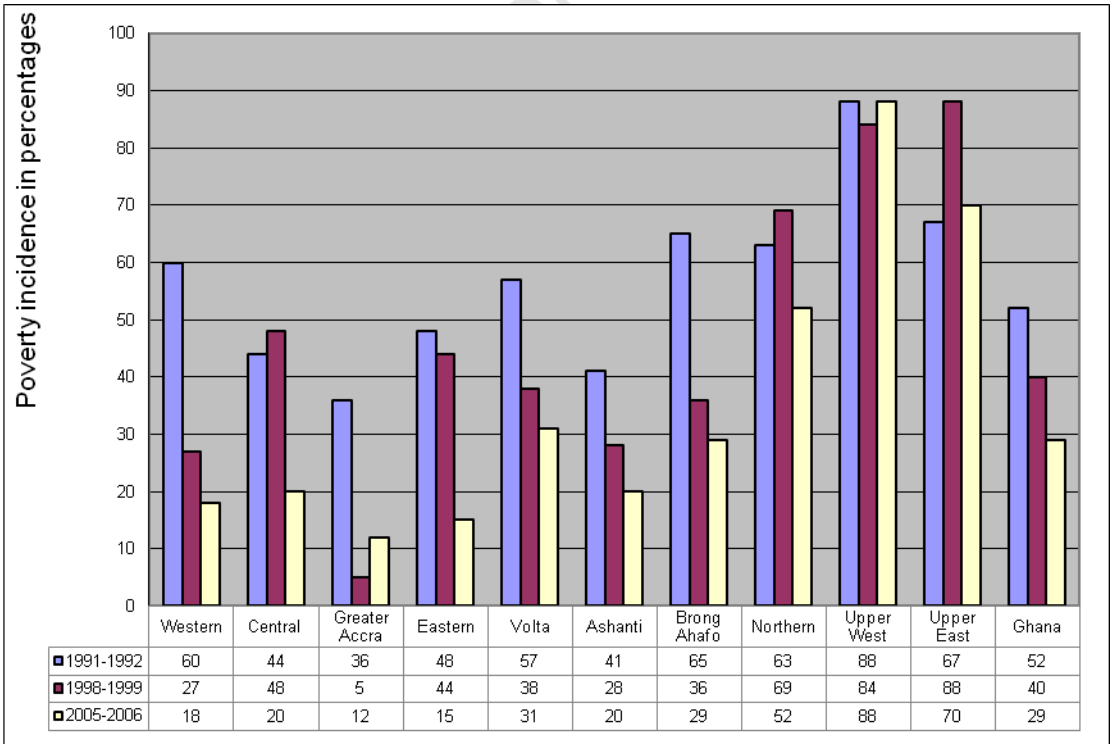
Ghana has experienced some economic progress over the past decade or more and national poverty rates have declined from approximately 51.7 per cent of the population in 1991-1992 to 28.5 per cent in 2005-2006. Poverty decreased by about 17 percentage points in urban areas and by 24 points in rural areas. Ghana's growth and poverty reduction rates are probably the best that have been achieved in all of sub-Saharan Africa over the past 15 years. Despite these achievements, there still

remains poverty in rural Ghana especially in the northern part of the country. More than half of poor people in Ghana live in rural areas and have limited access to basic social services (GSS 2007; IFAD 2008)

The Ghana Statistical Service measure poverty in relation to the total household consumption expenditure per adult equivalent, expressed in constant prices of Accra (i.e. regional price differences are adjusted for). The poverty line is based on the basic nutritional requirements (caloric intake) to sustain life, which is translated into the expenditure necessary to meet these basic nutritional requirement (GSS 2007)

Though over the years Ghana has seen a reduction in poverty the reasons that accounted for this reduction have not been documented. The savannah north however did not benefit much from economic growth. Poverty reductions were not evenly distributed geographically but were concentrated in Accra and the forest areas. Below is a graph on poverty incidence by region. It shows that the three northern regions (Northern, Upper East and Upper West regions) still experience a lot of poverty.

Figure 2. 2 Poverty incidence by region

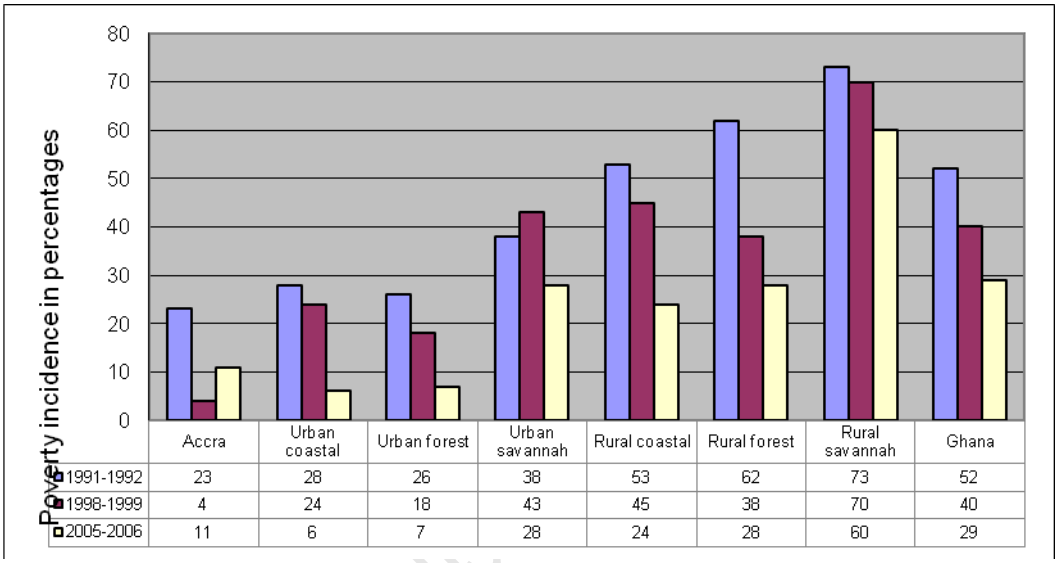


	Western	Central	Greater Accra	Eastern	Volta	Ashanti	Brong Ahafo	Northern	Upper West	Upper East	Ghana
1991-1992	60	44	36	48	57	41	65	63	88	67	52
1998-1999	27	48	5	44	38	28	36	69	84	88	40
2005-2006	18	20	12	15	31	20	29	52	88	70	29

Source: (GSS 2007)

Though the 2005-2006 poverty profile showed a decrease in poverty generally, poverty increased in Accra compared to 1998-1999 as a result of a large influx of migrants from poorer parts of Ghana. Many of these migrants are from the poorer Northern regions and rural areas of Ghana. The GSS (2007) categorized about 18.2% of the Ghanaian population as extremely poor. Figure 2.3 below indicates that poverty is widespread in rural savannah areas of the country. Though poverty is on the decline in all localities poverty in Accra the capital of the country is rising.

Figure 2. 3 Poverty incidence by locality

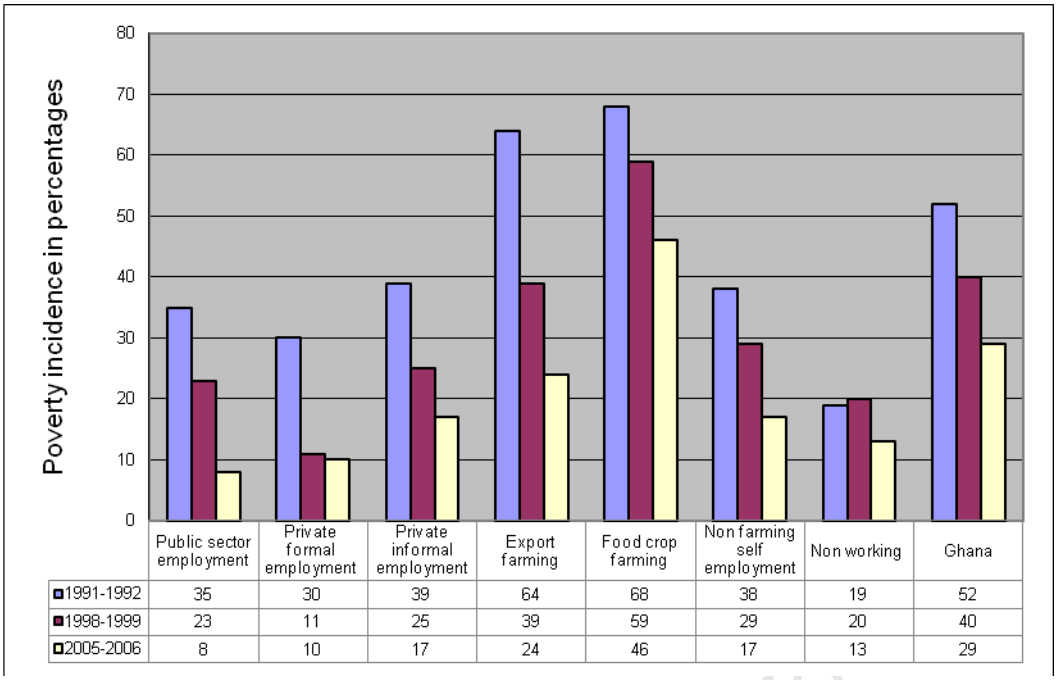


	Accra	Urban coastal	Urban forest	Urban savannah	Rural coastal	Rural forest	Rural savannah	Ghana
1991-1992	23	28	26	38	53	62	73	52
1998-1999	4	24	18	43	45	38	70	40
2005-2006	11	6	7	28	24	28	60	29

Source: (GSS 2007)

Nationally about 46% of those involved in food crop cultivation are poor (GSS 2007) as shown in Figure 2.4 below.

Figure 2. 4 Poverty incidence by economic activity



	Public sector employment	Private formal employment	Private informal employment	Export farming	Food crop farming	Non farming self employment	Non working	Ghana
1991-1992	35	30	39	64	68	38	19	52
1998-1999	23	11	25	39	59	29	20	40
2005-2006	8	10	17	24	46	17	13	29

Source: (GSS 2007)

Generally, despite the reduction in poverty, pockets of poverty still persist among rural dwellers, those living in the northern zone and food crop farmers.

2.6 New social policies

Several new social policies have been embarked upon by recent governments to enhance the lives of Ghanaians, including to improve health status. In the past 10 years, the Government of Ghana (GOG) has embarked upon economic reform and poverty reduction programmes to improve the living conditions of its citizens. The Livelihood Empowerment Against Poverty (LEAP) Programme was introduced in 2007. In 2008, the identified poor started receiving monthly allowances which ranged between Gh□8-Gh□15 depending on the household size. These allowances are targeted at those households whose expenditure falls below 50% of the national mean household consumption expenditure.

Households categorized as poor and eligible to benefit from LEAP have to comply with some conditions such as keeping their school-going children in school and not engaging in child labour or trafficking, register under the NHIS and exempt from paying premiums, complete immunization of their children and register newborn babies in the household (GBC 2008). The specific groups eligible for LEAP grants include: extremely poor farmers and fisher folks; extremely poor citizens above 65

years; caregivers of orphans; vulnerable children and children with severe disabilities; pregnant women and lactating mothers with HIV/AIDS.

Other new social policies introduced include the Capitation Grant. The government absorbed the school fees of all pupils in government basic schools. That is nobody has to pay fees for basic education. There was also the piloting of the School Feeding Programme (SFP) with the aim of extending it to all government basic schools. The Metro Mass Transport (MMT) service was introduced to provide affordable transport for all Ghanaians and free travel for school-going children. At the higher education levels, the Ghana Education Trust Fund (GETFUND) was introduced to provide infrastructural development in tertiary institutions of learning.

There were also new initiatives in the health sector. Efforts to make health care accessible and affordable to Ghanaians saw the introduction of the CHPS programme, which trained nurses and placed them in hard-to-reach rural communities. Then, the NHIS was introduced in 2004 and NHI contributions were fully subsidized for all pregnant women in July 2008 (Ghana Statistical Service 2008).

Despite these social policies, problems still exist within the entire system, one of which is the health system. Ghana's health system and health status are considered in greater detail below.

2.7 History of health care financing in Ghana and movement towards universality

Ghana has a history of many health care financing policy changes. Before Ghana's independence in 1957, user charges were instituted in all public health facilities and health care was financed through taxation, user fees and donor support. After independence, there were flat fees for public health services in Ghana and later it became free to the public and were financed through general tax and donor support (Agyepong 2008).

Ghana was hit by drought in the early 1980s and coupled with bush fires, there was extensive crop destruction. There was a decline in cocoa production, one of the key sectors of the country's economy, and a depressed world market for its principal

export cocoa. Mineral production fell and in addition, more than one million Ghanaians were forcibly repatriated from Nigeria. Ghana's economy was in "an advanced state of collapse and real per capita income fell by 30% from 1970-1982" (Ghana Resource Centre ; La Verle 1994; IMF 2001:673)

The country had to succumb to International Monetary Fund's (IMF) and World Bank's (WB) structural adjustment policies and subsequent reforms in 1985. Following these general reforms, the Ghana Ministry of Health (MOH) introduced significant client out-of-pocket payments (user fees) in all public health facilities. The aim was to recover at least 15% of recurrent operating costs. Ghana was one of the few countries to recover 15% of recurrent costs (Creese 1991). Though user fees for clients had existed earlier in Ghana, the amounts paid were minimal and more of a token. The much higher user fees introduced in the 1980s significantly affected the poor, and financial access became a problem. The user fees became known as the "cash and carry" system, because patients had to pay for drugs and some medical consumables at all government health facilities. This policy was strictly adhered to by all health facilities.

Access and utilization studies showed a significant reduction in the use of health services especially in rural areas after the re-introduction of user fees. For example, there was a 50% drop in outpatient attendance at the Korle-Bu Teaching hospital in the introductory year of user fees (Creese 1991; Asenso-Okyere and Dzator 1997; Atim 1998). A rigid imposition of user fees affected health care access for many and particularly the poor and other vulnerable groups (e.g. women, children and aged) in the society (Nyonator and Kutzin 1999; Garshong 2002; MOH/GHS 2003; Bosu 2004). User fees contributed to inequitable health service access and utilization between different socio-economic groups and between poor rural and richer urban dwellers (Waddington and Enyimayew 1990; Nyonator and Kutzin 1999).

Public health care providers were insistent that clients had to pay for services (Garshong 2002). Women were particularly hard hit by the user fee implementation. They were often detained due to inability to pay for delivery services, as were some other patients. Detention in hospitals of inpatients, especially women and their new-born babies, was taken up by the very vibrant Ghanaian electronic and print media.

Issues of patients' inability to pay for health services were brought to the fore and were extensively discussed in the media. The media had set the agenda for a reconsideration of user fees. Hospital fees and their effect on the population were discussed repeatedly and with passion.

In response to these public debates, government implemented an exemption policy with the aim of cushioning the adverse effects of the cash and carry system. This policy exempted the elderly i.e. those (above 70 years), children under five and paupers and antenatal care (ANC) for pregnant women, and some diseases of public health importance such as tuberculosis from fees (MOH 1983). However the implementation was beset with several problems including:

- unclear guidelines for identifying the poor;
- unclear guidelines on what services to exempt;
- qualified clients were unaware of what they were entitled to;
- providers were unwilling to exempt patients; and
- delays in and inadequate funds for reimbursement of fee revenue lost through exemptions.

Thus, the exemption policy failed to achieve its objective (Garshong 2002).

Consequently, mission and other health facilities in a number of deprived districts, with support from community members, set up community-based health insurance schemes (CBHIS). In addition to community initiated schemes, government initiated some pilot insurance schemes in the late 1990s. By 2002, there were more than 159 mutual health organizations covering about 1% of the population (Atim, Grey et al. 2001). User fees were still a major part of health care financing and fragmentation of funding mechanisms was very evident.

2.7.1 Major health financing reform in Ghana

The search for a more humane, alternative health care financing mechanism became a major social issue on the agenda of all political parties' manifestoes in the months leading up to the 2000 presidential and parliamentary elections in Ghana. The party that received the electoral mandate of the people had to implement their proposed policies if it was to be seen as performing, particularly in terms of alleviating the burden of user fees. Given the long experience with community based health

insurance schemes, coupled with the political context at the time, Ghanaians embraced the concept of the National Health Insurance when in 2001 the new government announced its intention to implement National Health Insurance (NHI) to replace user fees at the point of service (Agyepong 2008; Wahab 2008).

The government boldly initiated the implementation of the NHIS despite the uncooperative stance of some sections of the Ghanaian population on certain policy issues. For example, organized labour was not happy with channelling part of their Social Security and National Insurance Trust (SSNIT) contributions into the NHIF without clearly linking it to any benefit. Secondly the opposition party at the time felt the 2.5% increase in value added tax (VAT) was excessive and National Health Insurance Council (NHIC) functions were too broad (Agyepong 2008; Wahab 2008). Despite these concerns, the policy was translated into legislation in 2003. The National Health Insurance includes multiple schemes, with a District Mutual Health Insurance Scheme (DMHIS) in each of the country's 138 districts, private mutual health insurance schemes and private commercial insurance schemes in order to afford all Ghanaians the opportunity to join a health insurance scheme of their choice.

A National Health Insurance Fund (NHIF) was set up and financed through a payroll tax contribution of 2.5% towards health insurance via formal sector workers' contribution of 17.5% to the Social Security Scheme (SSNIT), a 2.5% value added tax on selected goods and services, an annual allocation of central government funds as well as donor support (Ministerial Task Team 2002). DMHIS received contributions directly from those in the informal sector, and allocations from the NHIF for formal sector workers in the district and to subsidise membership for the poor. The National Health Insurance Fund should serve as a risk equalisation and reinsurance fund for DMHIS. Poorer district health insurance schemes should get a bigger share of NHIF resources. As of September 2009, over 14 million people, forming 69.9 % Ghanaians, had registered with the NHIS. However, only 12 million had been issued with identity cards and were protected from out-of-pocket fees at the point of service use by the NHIS. This forms 84.9 % of total registered members (NHIS 2010).

The policy objectives in setting up a NHIS are stated in the national health insurance policy framework for Ghana (Ministerial Task Team 2002; Agyepong 2008) as:

> *'Ultimately, the vision of government in instituting a health insurance scheme . . . is to assure equitable and universal access for all residents of Ghana to an acceptable quality package of essential healthcare. The policy objective is 'within the next five years, every resident of Ghana shall belong to a health insurance scheme that adequately covers him or her against the need to pay out of pocket at the point of service use in order to obtain access to a defined package of acceptable quality of health service.'*

It is clear from the above statement that the desire of government is to attain universal coverage in a short period of time. However, this has not been achievable in the context of high poverty rates and problems with regard to granting exemptions from contributing to a DMHIS. The unclear exemption guidelines that existed in the cash and carry system persist today in the implementation of the National Health Insurance.

It is perceived that some aspects of the exemption are too broad (covering children up to 18 years provided parents are registered members) while other aspects (such as exemptions for the poor) lack a clear mechanism to identify those who should benefit. For instance there is no national database of individual household's socio-economic backgrounds. This means that a significant number of health service users within the vulnerable groups continue to experience obstructed access to healthcare.

2.8 Ghana's health system

Ghana's health sector can be divided into the public and private sectors. The Minister is the head of the health sector. The Ministry of Health (MOH) is responsible for policy formulation, planning, donor coordination and resource mobilisation. The Ghana Health Service (GHS), under the authority of a Director-General, is responsible for service delivery. A Ghana Health Service Council is in place to oversee the activities of the service. The teaching hospitals, i.e. Korle-Bu and Komfo Anokye, are autonomous bodies and have management boards. The GHS is organized in five distinct levels: national, regional, district, sub-district and the community level.

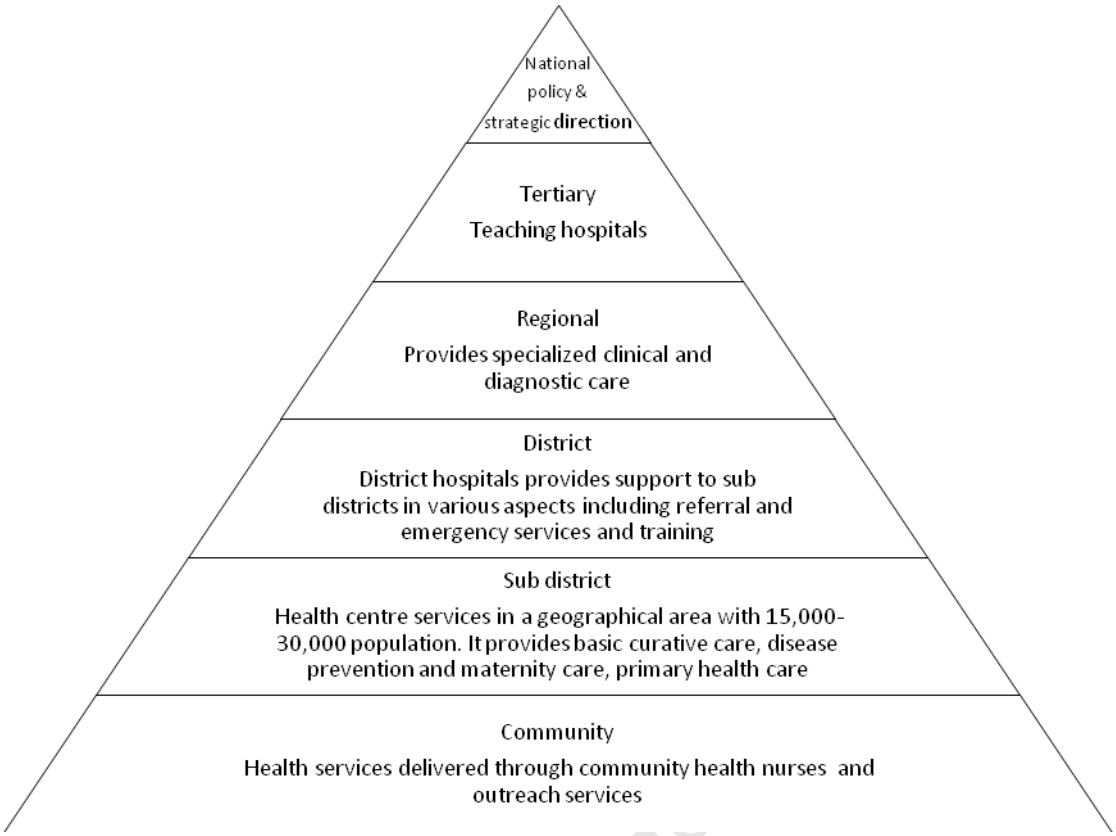
The regional level provides mainly clinical care to the population within their region. It is the referral point for clients from lower levels of the hierarchy. The Regional Health Administration (RHA) provides administrative, management and supervisory support to the peripheral levels, which include district, sub-district and community level health care provision.

The district level is managed by the District Health Administration (DHA) headed by a District Director. The DHA undertakes support, management and supervision of health facilities within the district. The district level provides both clinical and public health services to populations within their jurisdiction.

The next level is the sub-district. This level provides both clinical and preventive services to all communities within their catchment areas. They also provide outreach services to their communities. The outreach services include the provision of Child Welfare Clinics (CWC), which provide immunization and weighing of children under five and the management of minor ailments. At this level, trained traditional birth attendants are supervised and supported.

The Community Health Planning Services (CHPS) strategy has placed Community Health Officers (CHO) in the community to address geographical access. They provide some curative and preventive services to their communities with some support from both the health service and the community. Those CHOs with skills in maternity care also provide delivery services. The levels of the health sector are represented in the diagram below.

Figure 2. 5 Levels of the health sector in Ghana



Source: (GHS 2002)

The private sector includes private-for-profit and private-not-for-profit facilities. The Christian Health Association of Ghana (CHAG[1]) is the second largest provider of health services in the country. It is estimated that about 42%(CHAG 2008) of total health services are provided by CHAG. Private-for-profit facilities include hospitals and clinics, laboratories, pharmacies, chemical sellers, traditional healers and spiritualists and traditional birth attendants, both trained and untrained. Private-for-profit facilities are mostly located in big towns and other urban areas. Though the private sector contributes to health care in Ghana, details of their services are not reflected in most statistics of the GHS.

2.8.1 Human resources

The MOH Programme of Work (POW) 2007 defines human resources for health as the stock of all individuals engaged in the promotion, protection or improvement of

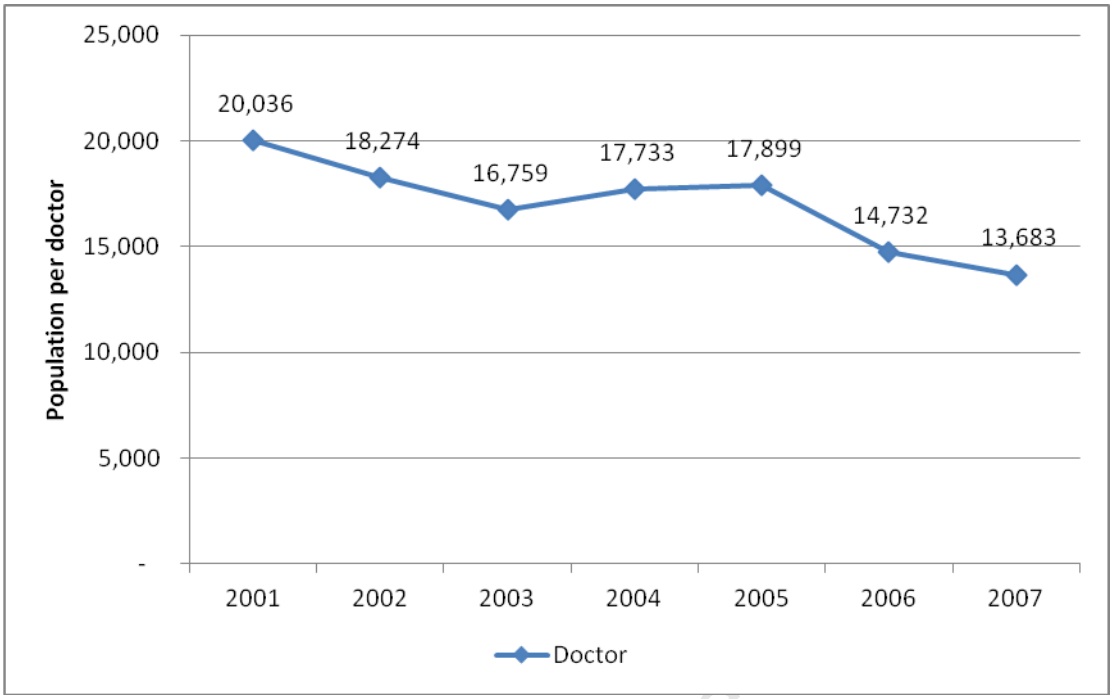
[1] The Christian Health Association of Ghana (CHAG) is a faith-based provider network organization, made up of 19 different denominations. Health facilities are owned by these religious organizations. The Catholic Church owns about 47.6% of all such facilities CHAG (2008). Annual Report, Christain Health Association of Ghana.

the health of the population. They are described as the ultimate resource of health systems and their skills, motivation and deployment has a direct link to health outcomes (WHO 2009). It is estimated that sub-Saharan Africa must triple the size of its health work-force for effective health care delivery (Chen 2004). Clinician densities (mainly doctors, nurses and midwives) of less than 2.5 per 1,000 population are regarded as leading to poor health outcomes (Chen 2004; Dussault 2006; WHO 2006). Ghana's human resources for health are way below these minimum targets.

The availability of human resources for health has been an ongoing concern for Ghana, particularly as a result of the 'brain drain' of health personnel to 'greener pastures' to countries especially to America and European countries (Hagopian 2004; Mackintosh 2007; WHO 2008). The 2007 programme of work (POW) states that the brain drain has stabilized however the health workforce still remains inadequate (MOH 2010) (See Figure 2.6 and 2.7 below).

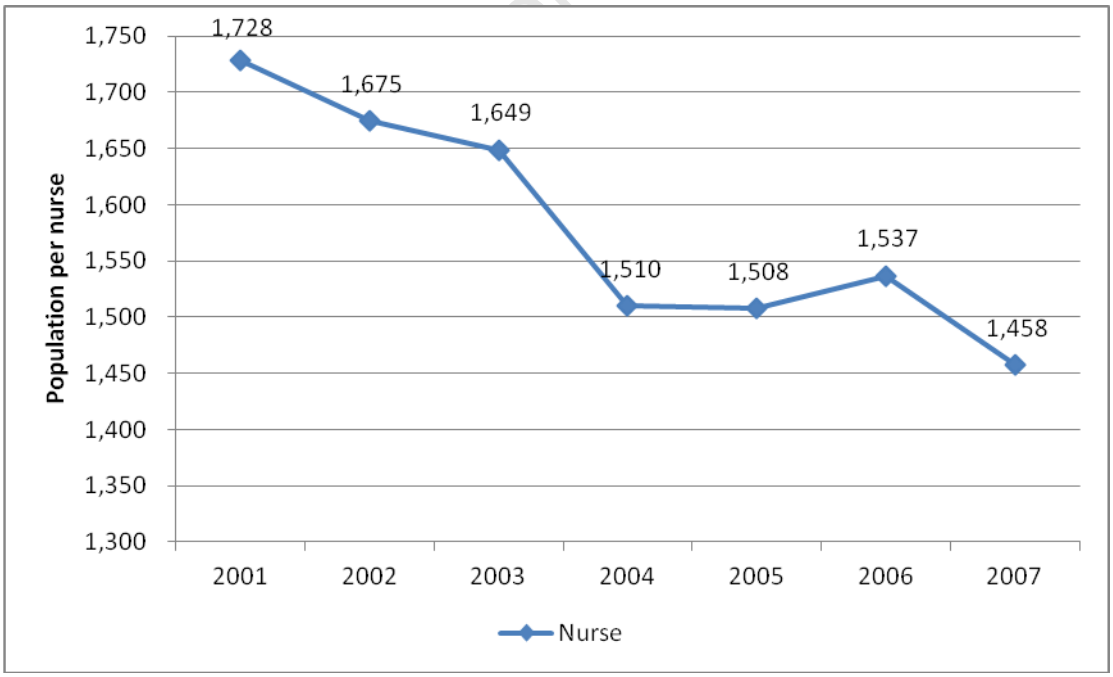
The population per doctor and nurse ration is still inadequate. Though the trend is improving this is not enough.

Figure 2. 6 Public sector population per doctor ratio in Ghana (2001-2007)



Source:(GHS 2007)

Figure 2. 7 Public sector population per nurse ratio in Ghana (2001-2007)



Source: (GHS 2007)

With the increase in health services utilization as a result of the introduction of the National Health Insurance Scheme (NHIS), the need to increase the number of health

personnel becomes of utmost importance. Ghana is still besieged by inequities in the distribution of health service providers across the country (MOH 2009), with the most highly trained professionals in the urban areas and less trained health personnel mainly in rural areas (Boom, Nsowah-Nuamah et al. 2004; MOH/GHS 2007).

The tables below show the doctor to patient and nurse to patient ratios in the public health sector by region.

Table 2. 1 Number of doctors and doctor to population ratio by region, 2006 and 2007 (public sector only)

Region	Estimated population 2006	Number of doctors	Doctor to population ratio	Estimated population 2007	Number of doctors	Doctor to population ratio
Ashanti	4,415,554	378	1:11,681	4,565,683	428	1:10,667
Brong Ahafo	2,105,317	83	1:25,365	2,157,949	96	1:22,479
Central	1,805,488	57	1:31,675	1,843,403	63	1:29,260
Eastern	2,289,969	104	1:22,019	2,322,029	128	1:18,141
Greater Accra	3,762,337	669	1:5,624	3,927,879	755	1:5,202
Northern	2,148,930	32	1:67,154	2,209,100	24	1:92,046
Upper East	982,510	34	1:28,897	993,317	30	1:33,111
Upper West	637,951	14	1:45,568	648,797	15	1:43,253
Volta	1,829,146	72	1:25,405	1,865,730	66	1:28,269
Western	2,324,949	72	1:32,746	2,399,348	71	1:33,794
National	22,302,150	1514	1:14,731	22,933,234	1676	1:13,683

Source:(GHS 2007)

The overall public sector doctor/patient ratio in 2007 was 1 doctor per 13,683 people (GHS 2007). However there are wide regional variations. A comparison of the Northern and Upper West regions with that of Greater Accra and the Ashanti regions

shows the inequities in the distribution of providers, with the deprived regions in the north having the worst ratios (GHS 2007).

The public sector nurse/population ratio is worst in the Western, Ashanti and Northern regions of the country (See Table 2.2 below).

Table 2. 2 Number of nurses and nurse to population ratio by region, 2006 and 2007 (public sector only)

Region	Estimated population 2006	Number of nurses	Nurse to population ratio	Estimated population 2007	Number of nurses	Nurse to population ratio
Ashanti	4,415,554	2067	1:2136	4,565,683	2,251	1:2,024
Brong Ahafo	2,105,317	1034	1:2036	2,157,949	1,099	1:1,964
Central	1,805,488	1145	1:1577	1,843,403	1,249	1:1,476
Eastern	2,289,969	1831	1:1251	2,322,029	1,977	1:1,175
Greater Accra	3,762,337	3789	1:993	3,927,879	4,011	1:979
Northern	2,148,930	1011	1:2126	2,209,100	1,131	1:1,953
Upper East	982,510	757	1:1298	993,317	798	1:1,245
Upper West	637,951	485	1:1315	648,797	537	1:1,208
Volta	1,829,146	1406	1:1301	1,865,730	1474	1:1,266
Western	2,324,949	982	1:2368	2,399,348	1197	1:2004
National	22,302,150	14507	1:1537	22,933,234	15724	1:1,458

Source: Adapted from (GHS/PPME 2007)

Many doctors and nurses refuse to work in the deprived regions of the country due to the poor infrastructure and living conditions in these environments. Innovative strategies have been put in place such as the Inter-Ministerial posting committee to allocate new staff to reflect equity and need. However, attempts made by the GHS to redistribute existing staff have been relatively ineffective (MOH 2009; MOH 2010).

The increasing number of visits to health care services with the implementation of the NHIS, led to the training of health aides and health assistants across the country as a short term measure. The training of additional health professionals is planned and the country aimed to have a ratio of about one doctor to 5,000 population and a nurse per 1,000 population by the end of 2010 (GHS 2005).

2.8.2 Health facilities in Ghana

The table below shows the distribution of various categories of health facilities across the country. It is clear that inequities also exist in their distribution between regions.

Table 2. 3 Health facilities by type and ownership, 2007

Region	Projected regional population 2008[2]	TH Govt	Reg Hosp Govt	Psy. Hosp Govt	Hospitals					Poly clinic	Health centres and clinics					Maternity homes			CHPS		*Total*
					CHAG	Govt	Islamic	Priv.	Quasi-govt	Govt	CHAG	Govt	Islamic	Priv	Quasi-govt	Govt	Priv.	Quasi-govt	Govt	Priv.	
Ashanti	4,720,916	0	0	0	17	22	3	48	2	0	32	140	2	161	9	3	105	0	4	0	549
Brong Ahafo	2,211,897	0	1	0	9	7	1	6	0	0	8	123	0	18	4	3	37	0	11	0	228
Central	1,882,115	1	1	1	3	8	1	8	1	0	9	68	0	62	2	0	34	0	43	0	241
Eastern	2354537	0	1	0	5	12	0	5	3	0	19	165	0	63	7	1	47	0	44	0	372
Greater Accra	4,100,706	1	1	2	3	7	2	79	6	7	5	42	1	232	16	2	55	1	4	0	466
Northern	2,270,955	0	1	0	4	8	0	1	2	0	25	120	0	5	3	0	9	0	10	0	188
Upper East	1,004,244	0	1	0	1	4	0	0	0	0	15	54	0	11	1	0	2	0	55	0	144
Upper West	659,826	0	1	0	2	3	2	1	0	0	14	60	3	4	0	0	6	0	39	0	135
Volta	1,901,179	0	1	0	8	11	0	7	1	1	9	192	0	23	0	0	24	0	19	0	296
Western	2,476,127	0	1	0	3	11	1	1	7	2	20	95	2	109	22	0	60	0	56	2	392
Total	**23,582,501**	**2**	**9**	**3**	**55**	**93**	**10**	**156**	**22**	**10**	**156**	**1059**	**8**	**688**	**64**	**9**	**379**	**1**	**285**	**2**	**3011**

Source: CHIM/PPME 2008

[2] Population projection using GSS 2000 Census

Apart from public health facilities, the Christian Health Association of Ghana (CHAG[3]) is the second largest provider of health service in the country. The CHAG is an association of mission health care facilities in Ghana. It works hand in hand with government. Their staff is paid by government and their facilities are accredited by the NHIS and provide service to insured clients. Their number of CHAG facilities has increased over the years and most are located in rural areas (CHAG 2008).

Hospital beds are mostly available in government, mission, and quasi-government[4] hospitals. Most private hospitals in the country are concentrated in the two largest regions; Accra and Ashanti regions where there is already a concentration of public health facilities. The lowest level of care i.e. the CHPS is the only public health care facilities that is more concentrated in other regions apart from Greater Accra and the Ashanti regions. The table below shows the number of hospital beds by region and ownership.

[3] The Christian Health Association of Ghana (CHAG) is a faith-based provider network organization, made up of 19 different denominations. Health facilities are owned by these religious organizations. The Catholic Church owns about 47.6% of all such facilities CHAG (2008). Annual Report, Christain Health Association of Ghana.

[4] Quasi government facilities are jointly owned by government and a government institution. E.g. the police and military hospitals.

Table 2. 4 Number of hospital beds by region and ownership, 2007 [5]

Region	Population (2008)[6]	Gov't	Quasi-govt	CHAG	Islamic	Priv	Total	Bed to population ratio
Ashanti	4,720,916	1929	202	1141	130	594	4,000	1:1180
Brong Ahafo	2,211,897	606	44	1905	68	9	1,817	1:1217
Central	1,882,115	1289	47	370	32	0	1,738	1:1083
Eastern	2354537	1505	177	993	0	0	2,675	1:880
Gt. Accra	4,100,706	3046	759	29	0	593	4,427	1:926
Northern	2,270,955	767	0	362	0	0	1,129	1:2011
Upper East	1,004,244	530	0	297	0	0	827	1:1214
Upper West	659,826	346	0	336	10	0	692	1:954
Volta	1,901,179	1208	47	958	0	0	2,213	1:859
Western	2,476,127	1192	323	439	49	0	2,003	1:1236
Total	**23,582,501**	**12,418**	**1,599**	**6,019**	**289**	**1,196**	**21,521**	**1:1096**
%by ownership		**57.70**	**7.43**	**27.97**	**1.34**	**5.56**	**100**	

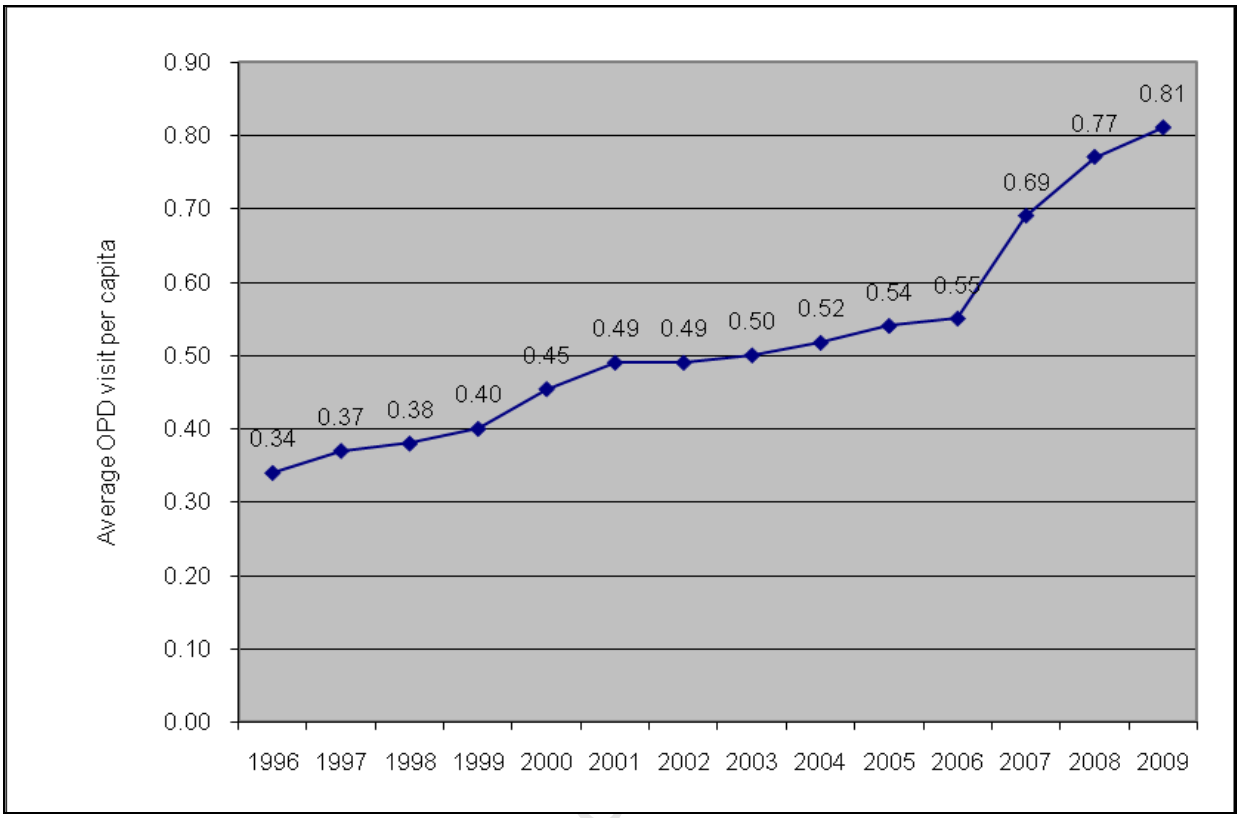
Source :(PPME/GHS 2008)

2.8.3 Health care utilization in Ghana

OPD attendance per capita at public health facilities in the country increased from 0.34 in 1996 to 0.81 in 2009 (see Figure 2.8 below).

[5] Data for quasi government, Islamic and private hospitals are incomplete.
[6] Population projection using GSS 2000 census

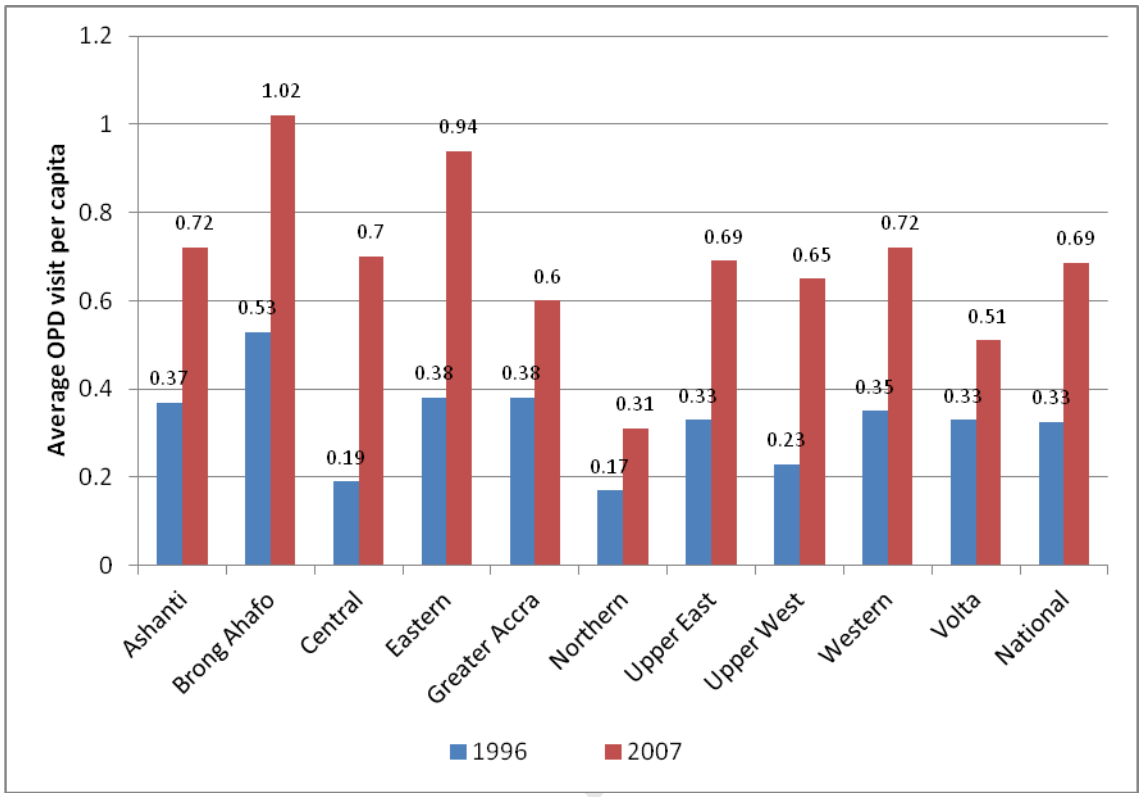
Figure 2. 8 OPD attendance per capita (1996-2009)



Source: (PPME/GHS 2008; MOH 2009)

This has been attributed to the National Health Insurance Scheme (NHIS) given that the largest increases occurred after the introduction of the NHIS in 2004. This trend is not the same across each region, with the Northern region showing very little increase in the last five years. However the Brong Ahafo, Eastern, Central and Western regions show marked increases.

Figure 2. 9 Average outpatient visit per capita by region (1996 & 2007)



Source: (PPME/GHS 2008)

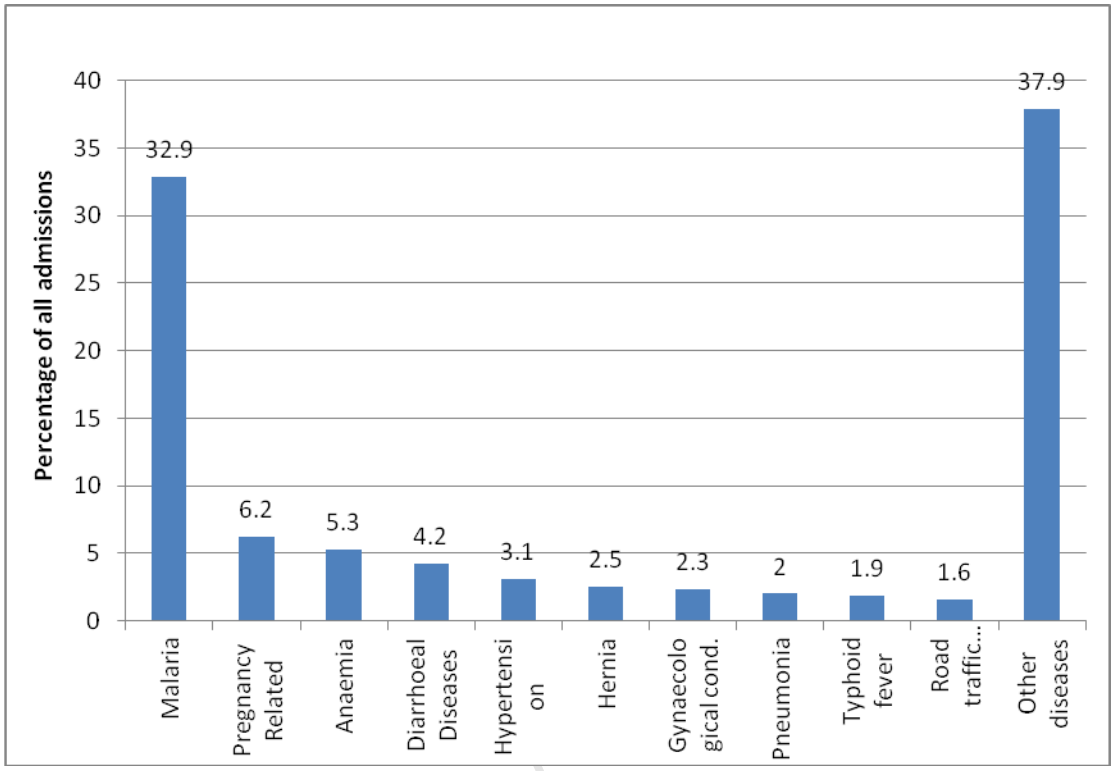
Public sector OPD attendance per capita in the northern region stands at 0.3 whilst that of Brong Ahafo is above 1 (Ghana Health Service 2007). The low utilization in the northern region has been attributed to the vastness of the land area in that region and the difficulty in reaching health facilities located far from communities often over bad roads. The problem highlights how geographical factors can be a major barrier to accessing health care.

2.8.4 Disease burden in Ghana

Most diseases afflicting Ghanaians are communicable and preventable. The top ten diseases reported for outpatients at health facilities in 2007 were malaria, acute respiratory infections, diarrhoea, skin infections and ulcers, acute eye infections and pregnancy related complications. In 2006, data collected in all regional and district hospitals (excluding the two teaching hospitals) on the major causes of hospital admissions showed that malaria accounted for about 33% of all

admissions in these hospitals. The disease is the number one cause of admissions for all ages in Ghana and contributes about 18% of deaths in public health facilities.

Figure 2.10 Top ten causes of admissions (all ages) in Ghana (2006)



Source:(PPME/GHS 2008)

Malaria accounted for more than 55% of OPD cases of children in public health facilities, respiratory tract infections for more than 12% and diarrhoeal diseases for about 7%. Malaria is a major cause of mortality in children (Ghana Statistical Service 2008) . It accounted for 20% of deaths in children under five. The management of these childhood diseases is addressed by the Integrated Management of Childhood Illness (IMCI) at public health facilities. However, the coverage of this intervention is still very low as many do not access these services (GHS/PPME 2007; Ghana Statistical Service 2008).

Though HIV/AIDS prevalence continues to decline in Ghana, sentinel surveillance results indicate wide variations among regions in Ghana. The Northern region has the lowest prevalence of 1.7% as compared to the Eastern region with the highest of 4.3%. Though the number of people on Anti-Retroviral Therapy (ART) has increased, more women are receiving treatment than men (GHS/PPME 2007).

With the Guinea Worm Eradiation Programme (GWEP), there has been a steady decrease in guinea worm cases in the country but the Northern region continues to have the highest number of cases, accounting for 96% of cases in Ghana (GHS/PPME 2007).

Non-communicable diseases such as hypertension and diabetes mellitus are becoming a cause for concern in Ghana. In 2007 hypertension was among the top 10 causes of OPD attendance. Figures from the GHS (2007) annual report indicate that the proportion of OPD attendances for hypertension ranges from 1.4% in the Northern and Upper East regions to 6% in the Volta region of Ghana. More females are affected than males in all regions.

Cataracts are a leading cause of blindness in Ghana but surgery is free (Assume even if not a NHIS member would get it free). However, for poor people living in hard-to-reach areas of Ghana, the cost of transportation to service delivery points is a hindrance (GHS/PPME 2007).

As this thesis has a focus on the distribution of benefits from maternal and child health care, in addition to overall health services, the next sections consider maternal and child health issues in a bit more detail.

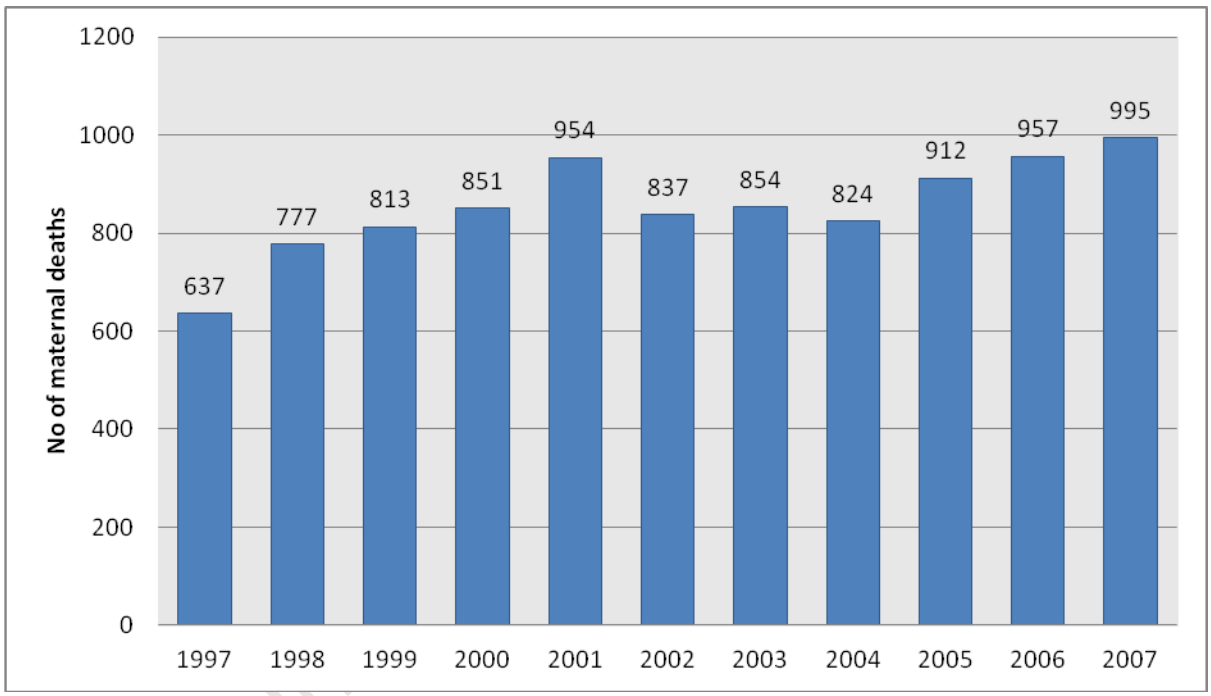
2.8.4 Maternal Health

The disparity in risk of adverse events during pregnancy between women in developing and developed countries has been described as the greatest health divide. Maternal health was declared a national emergency during Ghana's health summit with partners in 2008 (MOH 2010). The 2009 State of the World's Children reports that, a woman in Niger, for example, has a one in seven chance of dying during the course of her lifetime from complications during pregnancy or delivery. In Ghana it is one in 45 and one in 110 in South Africa. Tanzania's is one

in 24. In contrast, the risk for mothers in a developed country, such as Ireland, is one in 48,000 (UNICEF 2009).

The figure below shows the institutional maternal deaths in Ghana from 1997-2007. It shows a steady increase from 2005 to 2007. The maternal mortality rate increased from 197 per 100,000 live births in 2005 to 230 in 2007 (GHS/PPME 2007). The institutional maternal mortality ratio was 229 per 100,000 live births in 2006.

Figure 2. 11 Number of institutional maternal deaths 1997-2007



Source: (GHS/PPME 2007)

The World Health Organization (WHO) recommends at least four antenatal care (ANC) visits during pregnancy. Eighty eight percent of urban women had adequate ANC as compared to 71% of their rural counterparts. Also, more urban women attended ANC during the first trimester than rural women (Ghana Statistical Service 2008)..

With the high levels of anaemia in pregnant women, iron supplements are provided during ANC visits. There were considerable variations in women who used iron supplements during

pregnancy according to rural-urban residence, region, wealth quintile and education (GHS/PPME 2007). Women in Ashanti, Western and Greater Accra regions, in richer households and those with better education were more likely to take iron supplements than those in the Northern and Upper West regions. These women were also more likely to be informed about pregnancy complications than their counterpart households that were poorer and with a lower level of education.

Almost twice as many births occur in rural than urban areas. More than half (53%) of women in Ghana delivered at home, according to the DHS(2008) report. The proportion of births in health facilities was 24% for women in poorer quintiles and 93% for women in wealthier quintiles.

In remote areas in Ghana, there are a few basic health care facilities and this presents challenges for rural women. A child born in an urban area is twice as likely to be delivered in a health facility as those born in rural settings. The CHPS compounds were introduced as one of the measures to bring health services close to clients. These compounds are manned by community health officers, some of whom have midwifery skills and can detect complications and make referrals where appropriate. The percentage of women assisted by a health professional during delivery varies by region, place of residence and socio economic status. About three times more women were assisted by a skilled attendant in the Greater Accra region than in the Northern region (Ghana Statistical Service 2008).

More than a quarter of women in the wealthiest quintile were seen by a doctor during delivery as against 2.2% of women in the poorest quintile. Conversely, more than a third of women in the poorest quintile were assisted by an untrained traditional birth attendant (TBA) as compared to only 1% in the richest quintile. Generally births to poorly educated and rural women are less likely to be assisted by a trained health professional and are often delivered at home (GHS 2007; Ghana Statistical Service 2008; WHO 2009). Service statistics in the annual report indicate that skilled delivery increases nationally from 42.2% in 2008 to 45.6% in 2009. As shown in Table 2.5, there are substantial differences in skilled deliveries across the regions, and while skilled delivery rates increased in most regions between 2006 and 2009, they decreased considerably in the Central region. Nevertheless, this was from a relatively high base and so the Central region

still had one of the highest levels of skilled delivery in 2009. Unfortunately, there is no published research explaining the decline in the Central region, nor why there are such wide differentials in skilled delivery rates across regions.

Table 2.5 Trend in skilled delivery by region (Percentage of deliveries)

Regions	**2006**	**2009**
Ashanti	40.8	42.4
Brong Ahafo	47.4	53.7
Central	74.0	52.5
Eastern	38.7	52.1
Gt. Accra	42.2	47.9
Northern	25.1	36.1
Upper East	38.4	52.6
Upper West	28.8	36.7
Volta	35.4	39.4
Western	34.8	42.6
Total	**44.5**	**45.6**

Source: (GHS 2009)

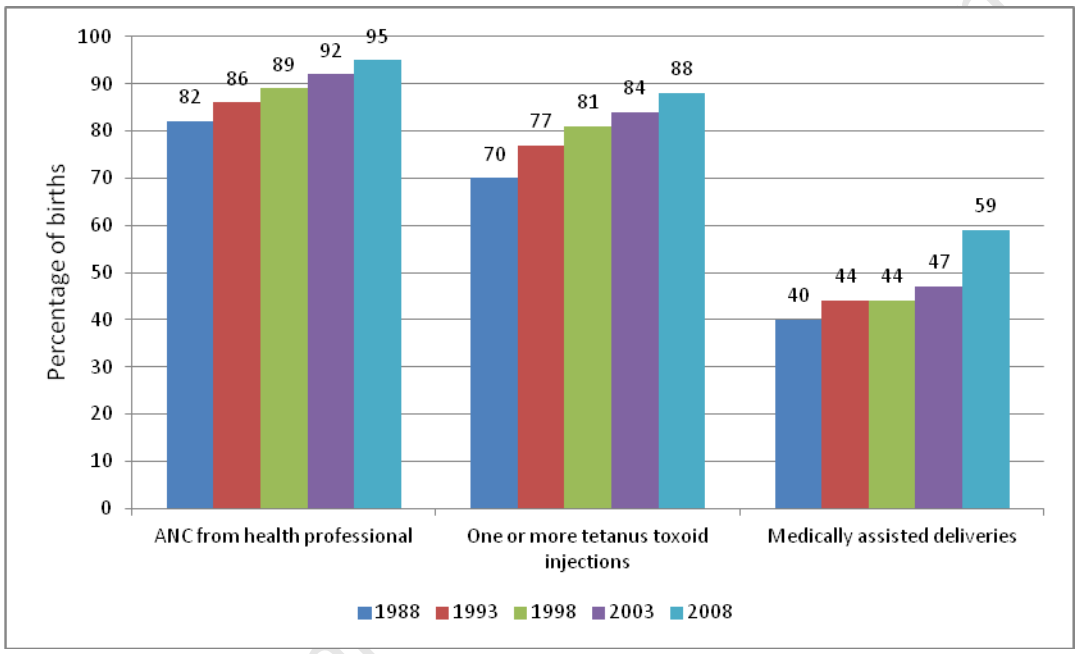
It is of concern however that the Upper East and West regions have not had a obstetrician for many years and that the number of practicing midwives is declining in the country as a whole (GHS/PPME 2007) . In most hospitals in the country there is lack of facilities for blood storage (GHS 2009).

A key indicator of access to and utilization of maternal health services is the percentage of births by caesarean sections (United Nations 2009). This procedure is life-saving and women who do not have access to it when needed will die or develop disabilities. The GHS (2007:33) report noted that caesarean section rates lower than 5% may mean that women do not have access to these life saving operations. The percentage of births delivered by caesarean section was 5.6% in the poorest quintile and 22% in the richest. There were also regional differences; whilst

Greater Accra exceeded 15%, the three northern regions were well below 4% (GHS/PPME 2007).

Maternal health care indicators show an increasing trend in the provision of ANC services by professionals and tetanus injection coverage. While medically assisted deliveries increased, performance is not impressive (see Figure 2.12). The DHS (2008) indicates that women attribute cost of care, distance to a health facility and quality of care as reasons for not seeking maternal health care.

Figure 2. 12 Trends in maternal health indicators (1998-2008)



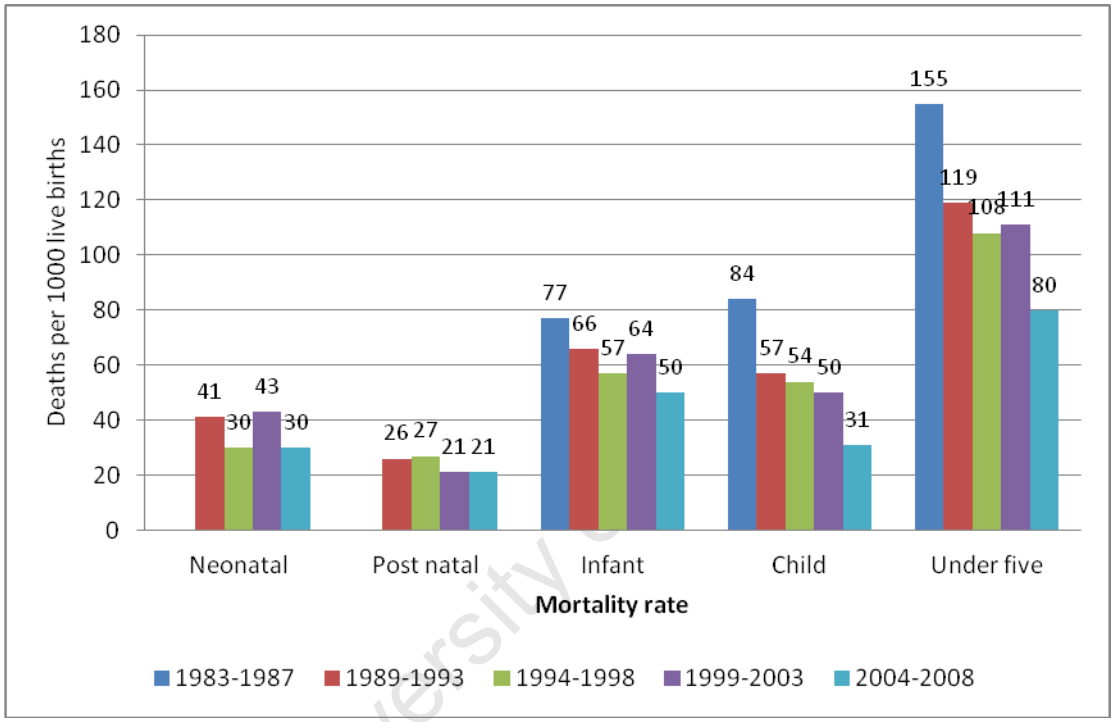
Source: DHS 2008

2.8.5 Child health

Child mortality is regarded as a key indicator of both health service delivery performance and the living standards of a country. Significant reductions have been made in child mortality globally but wide variations exist between countries. Most countries in sub-Saharan Africa are among the countries with the highest under-five mortality rates. Ghana ranks the 30th worst in the world, using 2007 figures (WHO 2008).

Ghana has reduced child mortality in the past decade (see Figure 2.13). Infant mortality has moved from 77 per thousand live births in the mid-1980s to 50 in 2008 and under-five mortality has moved from 155 per 1,000 to 80 in 2008 (Ghana Statistical Service 2008).

Figure 2. 13 Child mortality trends, Ghana 1998-2008



Source: DHS 2008

Childhood illnesses such as malaria, acute respiratory infections (ARI) and diarrhoea are major health challenges for children under five in Ghana. Prompt and appropriate treatment is critical in reducing childhood deaths. Urban children are more likely to receive care than children in rural areas (GSS 2008).

Malnutrition increases the risk of morbidity and mortality in children. The 2008 DHS showed 28% of Ghanaian children are stunted. Prevalence of stunting varied from 14% in Greater Accra to 36% in the Upper East region. Stunting is higher for boys than girls and in children whose

mothers have little or no education. Rural areas bear the brunt of stunting and it is widespread in the Northern, Upper East, Central and Eastern regions of Ghana.

Wasting is more prevalent in the Upper West region than in any other region in the country. Anaemia among children under five is more prevalent in rural children (84%) than in urban children (68%) and varies across regions from 68% in Greater Accra to more than 88% in the Upper East region. Nine in 10 children in the Upper East and Upper West regions are anaemic (Ghana Statistical Service 2008).

2.8.6 Key recent MCH interventions

The High-Impact Rapid-Delivery (HIRD) approach is a strategy developed to reduce maternal and child mortality. Most HIRD services do not attract user fees. The approach involves a rapid scale-up to attain universal (at least 90%) coverage of key priority interventions, which have been proven to have a high impact on maternal and child mortality (see Box 2.1 below). Regions and districts are required to identify challenges in achieving universal coverage, formulate strategies and develop plans for overcoming these challenges and estimate funds required to implement their plans. This strategy was initiated in the four most deprived regions in Ghana, Northern, Upper East, Upper West and Central regions in 2005.

Box 2. 1 Interventions being implemented as part of the HIRD package in Ghana

A: Intervention to improve child survival and development

- Exclusive breastfeeding for the first 6 months
- Appropriate complimentary feeding from 7 – 23 months
- Immunization against vaccine preventable diseases
- Oral Rehydration Therapy for children with diarrhea
- Vitamin A supplementation for children 6-59 months
- Regular deworming of children 24-59 months
- Promotion of the use of insecticide treated nets for children under 5 years of age
- Growth promotion and monitoring from birth to 59 months
- Integrated management of childhood illness

B: Interventions to improve maternal health

Focused antenatal care

- Promotion of the use of insecticide treated nets
- Intermittent preventive treatment of malaria
- Iron supplementation
- Folate supplementation
- Deworming
- Early detection and appropriate management of anaemia
- Tetanus toxoid vaccination
- VCT and nevarapine treatment for those who need it
- Skilled attendance during labour and delivery
- Postnatal care
- Vitamin A supplementation within 8 weeks post-partum
- Promotion and provision of family planning services

Source: (GHS/PPME 2007)

2.8.7 Equity concerns in the Ghana health system

Health facilities are geographically concentrated in urban areas and human resources for health follow the same pattern. However much of Ghana's population is located in rural areas with only a few private facilities that provide rudimentary care. Differences in the health burdens between and within regions of Ghana are evident. The three northern regions and rural areas in general continue to lag behind the rest of the country, with their residents being unable to benefit from health services adequately.

In conclusion, the equity challenges in Ghana's health system include economic inequities between the rich and the poor, geographical challenges between rural and urban locations and organizational arrangements. With the introduction of the new health financing policy, with the aim of removing financial barriers to health care use by the poor most of whom are in the informal sector (MOH 2010), this study seeks to investigate who is currently benefiting from this new health financing policy from a service use perspective.

To date, factors that contribute to service use equity differences in Ghana have not been adequately investigated to make it possible for policy makers to tackle these effectively, though several assumptions have been made. This study seeks to provide empirical evidence to understand the underlying factors so as to assist policy makers in their pursuit of equity in Ghana's health system.

CHAPTER THREE

LITERATURE REVIEW

3.0 Introduction

This chapter begins by reviewing the literature on the core subject of this study; equity in the distribution of benefits from the use of health care services. Next, I review the concept of need and how it has been defined with reference to health care. This is followed by what benefit incidence analysis is and how it is measured and a look at some benefit incidence studies especially in low- and middle- income countries and lessons from these studies in relation to health care equity.

The literature review used three major strategies; a search of key electronic databases, including Medline, Science Direct, Biomed Central, Cinahl and Google scholar; a search of relevant websites including WHO, World Bank, UNICEF and Ghana government websites; and a snowballing method where I reviewed the list of references in the literature identified through the other two methods and located the referenced literature where appropriate. The key words used for the literature search included: 'benefit incidence analysis', 'health equity', 'need', 'health care access', 'Ghana', and 'low-income and middle-income countries'. The only exclusion criteriawas literature that was not published in English. While the emphasis was on literature within the past 10 years and literature published in peer-reviewed journals, reports outside these parameters were also reviewed.

3.1 Equity in health care

The concept of equity has moral dimensions and has something to do with fairness and social justice (Mooney 1994; McIntyre 2008). Differences in perceptions of what constitutes equity can occur within the same country across different individuals or groups and at different times. These differences notwithstanding, the concept deals with social justice and fairness in the way resources, such as for social services, are distributed among a group of people. A distribution of

resources is regarded as inequitable when these resources are not fairly distributed. In contrast, health care equity refers to the absence of systematic differences in health care access and use between social groups as a result of their positions in society (Kalua 2009).

Generally, the poor tend to suffer higher rates of morbidity and mortality than their richer counterparts but use less health services for various economic and social reasons (Freedman, Waldman et al. 2005; O' Donnell 2008). Therefore, health systems have been described as in general being inequitable given that consistently more and better services go to the well-off who need them less, than to the poor who need them most (Gwatkin, Bhuiya et al. 2004). This phenomenon has been described as the "inverse care law" (Hart 1971; Peters, Gard et al. 2008). In an equitable health system, those who suffer higher rates of morbidity should use health services more than those who suffer less morbidity.

The distribution of health care services is largely dependent on the arrangement of the health system of a country. These arrangements are largely dependent on government policies. Governments and society as a whole must work to reduce inequities in the health system (United Nations 2009). Inequities in health care should be a concern for policy makers as they have a responsibility to ensure that health care reaches all population groups irrespective of their social standing and circumstances (Culyer 2001; Braveman and Gruskin 2003; WHO 2008). Mooney (1994:84) referred to a statement by the founder of the NHS of the United Kingdom that "...society becomes more wholesome, more serene, and spiritually healthier, if it knows that its citizens have at the back of their consciousness the knowledge that not only themselves, but all their fellows, have access, when ill...".

The next section explores the concept of universal coverage, which is strongly linked to the notion of equitable health systems.

3.2 Universal coverage

The concept of universal coverage in the health sector is built around the principle of financial protection against the costs of health care as well as access to needed care for all members of the society; these constitute necessary conditions for improved health system equity (WHO 2008).

Wagstaff (2010) has noted that while, in most countries, public health facilities are open to the entire population, in many cases the fees charged for services makes it difficult for some segments of the population to pay these fees and therefore are not able to use health services. This refers to the issue of financial protection; mechanisms should be put in place to protect the population against the need to make out-of-pocket payments at the time of service use. This is accomplished by ensuring that there are pre-payment mechanisms (such as tax and/or health insurance schemes) for funding health services. Increasing pre-payment funding has been a key focus of recent health care reforms. For example, the main reason for implementing the NHIS in Ghana was to provide financial protection against the burden placed on people by the 'cash and carry' (i.e. user fee) system.

However, this is not sufficient to achieve universal coverage. Wagstaff (2010) also points out that although people may be entitled to use publicly funded health services, in some instances the services are simply not available, or there may be a nearby health facility but essential drugs are not available. This refers to the issue of access to needed health care. All too frequently, the focus is placed entirely on ensuring financial protection while the need to supplement this with ensuring access to needed care is not given adequate attention.

Thus, the key issue in achieving universal coverage is working towards protecting people from paying out-of-pocket for care at the point of services and making sure appropriate services are available when needed. From a policy perspective, the emphasis on **universal** coverage (i.e. coverage for **all**) can be daunting. Wagstaff (2010) proposes that the way to move towards universal coverage is by focusing on reducing inequities in financial protection and access to care.

3.3 Need

A key element of the definition of equity in health care, and the access component of universal coverage, is the concept of need. Medical care is often referred to as a service that should be distributed according to need (Culyer 2001). The concept of need relates partly to the extent of sickness, in that in general, the more illness within a community or in a person the greater the

need for health care. Need has been defined also as the "capacity to benefit" from health care services (Mooney 1994; McIntyre and Ataguba 2010). There are cases where nothing can be done about the ailment and therefore no capacity to benefit.

Need can be viewed from different perspectives; the physician, the individual or the community. These different perspectives inform how one perceives interventions for dealing with a specific need. For example whilst an individual might think of dealing with a specific health problem by seeing the herbalist or spiritualist, a clinician might prefer the use of orthodox medication whilst a public health nurse might choose health education (McIntyre, Mooney et al. 2009).

Definitions of need therefore vary as various perceptions, beliefs and training, among other factors, come into play. The key challenge, however, is how to measure health care need in a population. While some may regard the 'gold standard' to be diagnosis by a health profession, but this raises several challenges in the context of a study like this. Firstly, need will be underestimated as some may not be able to go to a health facility for the measurement of their health status. Secondly, information on levels of ill-health that are drawn from health care providers gives no indication of the socio-economic status of those who present for health services. As the purpose of this study is to evaluate the distribution of benefits from using health care relative to need for care across socio-economic groups, it is essential to have a measure of need that is linked to information on the socio-economic status of those in need. For this reason, the international norm is to secure such data via household surveys, and thus to measure need from the perspective of the individual.

One way of measuring health need through household surveys is self-reported illness, but this has not been an effective way of measuring need in a population as illness is perceived differently by different population groups. In contrast, self-assessed health (SAH) status has been found to be a more reliable way of measuring the health status of individuals via household surveys (Mamot 1991; Idler 1997; Miilunpalo 1997; Kennedy 1998; Shi 2000). Although SAH is regarded as a 'crude' measure of need for health care in a population, and encompasses not only the presence of illness or disease but the general well-being of an individual (Nielsen, Siersma et al. 2008; O' Donnell 2008), it has been found to have a strong correlation with clinically

diagnosed illness. It is for this reason that SAH status was used as an indicator of the need for health care in this study.

In this study one of the key objectives is to find out if benefits of health care service are distributed according to need across socio economic groups. Benefit incidence analysis (BIA) is a methodology used to find out how social services, such as health care, are distributed across population groups.

The next section presents a preamble to BIA in terms of why government subsidies should be equitably distributed, followed by how distribution is measured using BIA, an overview of some benefit incidence studies and key findings from some low- and middle-income countries.

3.4 Why government subsidies should be equitably distributed

It has been argued that "when it comes to enhancing basic human capabilities and in particular, beating persistent hunger and deprivation, the role played by public support-including public delivery of health care and basic education-is hard to replace"(Graham 2007:434). This notion emphasises the importance of public subsidy in growth.

When government support is put into areas for social development, it is essential to verify that the expenditure is reaching the entire population according to their relative need i.e. equitably. Benefit incidence analysis (BIA) enables governments to check the efficiency and equity of its spending. The methodology also assesses the social impact of government policy and monitors the performance of systems. In the past, benefit incidence has been seen as a useful way of assessing how effectively governments are able to transfer their limited resources to meet the needs of the poor in particular (Castro-Leal, Dayton et al. 2000; Pearson 2002; Davoodi 2003; Sabir 2003; Alabi, Adams et al. 2010). This perspective is particularly linked to the previous emphasis on targeting resources to the poor. However, it has broader relevance and the methodology has been described as "an accounting procedure that seeks to establish to whom benefits of government spending accrue and with recipients being ranked by their relative economic position" (O' Donnell 2008:165).

The methodology focuses on the cost of producing a public service and those who use the service and how use is distributed among different groups (Demery 2000; Davoodi 2003; Sabir 2003; O'Donnell, Van Doorslaer et al. 2005). Most frequently, these groups have been defined in terms of socio-economic status. Benefit incidence studies can also be used to assess incidence of public spending over a period of time, between geographical zones, residence and gender among others.

Benefit incidence has been used for about thirty years. In 1979, Meerman (1979) and Selowsky (1979) studied the benefit incidence of public spending in Malaysia and Colombia respectively. Thereafter others have modified and used it to measure public spending in various countries in Asia, Europe and Latin America and more recently in Africa.

3.5 Measuring benefit incidence

The measurement of benefit incidence involves some key steps.

1. Selecting a measure of living standards, and individuals or households are aggregated into defined groups by some welfare measure such as income, expenditure or assets or a combination of these.
2. Users of the service in question are identified.
3. Estimating government spending or the unit cost/subsidy for providing specified services. For example, the analyst will estimate the cost of providing health care at different hospital or health centre levels.
4. Out-of pocket payments are deducted from the unit cost, (if one is only focusing on government subsidies).
5. Utilization is multiplied by unit costs of each type of health care for each socio economic group.
6. Benefits of utilization are expressed in monetary terms across different types of health services for each socio economic group (Van De Walle 1998; Castro-Leal, Dayton et al. 2000; Demery 2000; Davoodi 2003; Sabir 2003; O' Donnell 2008; Davoodi, Tiongson et al. 2010; McIntyre and Ataguba 2010)

Although these steps look simple, they have their own challenges. The steps are explained below along with some challenges.

3.5.1 Selecting a measure of living standards

Basically, two broad approaches are used to measure socio-economic status. The "direct" approach entails the measurement of income, expenditure or consumption. Then there is the "proxy" measure where available information on household assets and durable goods and household characteristics are used. Computing the welfare indicator can be a challenge and each of these welfare measures has its own challenges (Van De Walle 1998; Castro-Leal, Dayton et al. 2000; Demery 2000; Davoodi 2003; O' Donnell 2008). It is important to be aware of the limitations of each of these indicators.

Income consists of earnings from productive activities or transfers and four main sources of income are generally distinguished (O' Donnell 2008). These are wages from labour services, income from renting land, capital or other assets, self employed income and transfers from other sources. O'Donnell et al. (2008) are of the view that income data need not be used in the measurement of living standards. In fact they are rarely used.

Expenditure on the other hand refers to payments made based on market transactions to obtain goods or services. Consumption refers to resources actually consumed. Although many components of consumption are measured by looking at expenditure, these two indicators are often distinguished (O' Donnell 2008). The difference has to do with the fact that expenditure does not include consumption that is not based on market transactions e.g. (consumption of subsistence agricultural produce). Though consumption is a preferred measure of living standards, it is generally difficult to collect. Moreover it can be data intensive, time consuming and expensive.

There has been a long-standing debate on the most appropriate measure of living standards (O' Donnell 2008). For developing countries, a strong case for using consumption is made based on conceptual and practical considerations. Firstly income may be received intermittently, while consumption can be "smoothed" over time. Therefore it is rational to expect that expenditure or consumption will be more directly related to current living standards than income, at least for short reference periods (Makinen, Waters et al. 2000). Consumption over a period of a week or a

month, therefore, may provide a good indication of consumption level in a full year, whilst income over the same period may not be an accurate measure of income for a full year.

Secondly, income data is difficult to collect. In developed countries, though a large proportion of the population fall in the formal sector, there are problems with handling self employment and information on informal economic activities. Most importantly, individuals are generally reluctant to disclose their incomes. In developing countries such as Ghana, a large segment of the population are in the informal sector, households often have multiple income generating activities and subsistence production is widespread. Here too, respondents are reluctant to disclose their income. One of the reasons for the hesitance to disclose income in Ghana is the belief that such information will be used for taxation purposes. Given these circumstances, it is generally easier to measure expenditure or consumption than income in the Ghanaian context. Nevertheless, measuring expenditure or consumption is time consuming and resource intensive.

These limitations have prompted the use of a proxy measure such as data from routine surveys on household ownership of durable goods and housing characteristics to construct an index of "wealth" (Zere, Moeti et al. 2007; O' Donnell 2008) using Principal Component Analysis (PCA). Data on household characteristics can quickly and easily be collected in a single household interview and is a suitable way of measuring living standards of a household. Information on these indicators is combined into a single index.

The choice of a welfare measure may affect conclusions from a benefit incidence analysis. For example, a study in Mozambique by Lindelow (2006) showed that the choice of welfare indicator can have a significant impact on the estimated socio-economic inequalities in service use and incidence of public spending. Their study found less inequality in utilization when consumption rather than the asset index is used as the welfare measure. When the asset index was used as the welfare measure, the poorest received only 9.6% of all child immunizations, however when ranked by consumption they received 21.4%.

O'Donnell et al. (2008) however made reference to a study by Wagstaff and Watanabe (2003) where they compared inequality in wasting and stunting for 19 countries based on Living

Standards Measurement Survey (LSMS) data. They found that for most countries, the choice between consumption and the asset index as the welfare measure makes little difference to the measured degree of socioeconomic inequality. They concluded that "this finding offers a degree of confidence to analysts who are concerned about the robustness of their results" (O' Donnell 2008:80).

3.5.2 Identifying users of the service

The next step is indentifying those who use the health service. Data on utilization can be obtained from two sources, firstly from household surveys and secondly from service data. Each of these two has its challenges. The challenge with facility-level data is that it often does not contain socioeconomic characteristics of users, though it has the advantage of recording the total number of visits to health facilities. On the other hand, household surveys have demographic and socio-economic characteristics but do not have details of the precise facility used and sometimes even the type of facility used.

Two common problems that exist in using household survey data for benefit incidence analysis is that the reporting of use of health care by household members is often linked to reporting of illness (Demery 2000; McIntyre and Ataguba 2010). This bring about biases given that the poor and illiterate often do not report illness as compared to their rich and educated counterparts (Castro-Leal, Dayton et al. 1999; 2000). The poor see illness as normal and part of everyday life and cannot afford to be ill. This leads to under-reporting of illness and consequently under-reporting of health service use. The concept of illness and patterns of treatment vary across communities (Castro-Leal, Dayton et al. 2000).

Another drawback is the way in which questions on utilization are framed in many household surveys. The framing of the questions do not give respondents the opportunity to refer to use of preventive and promotive services such as ANC visits, reviews and checkups or to reports of multiple visits for the same ailment. Instead, utilization for a single visit is recorded, thus underestimating use and consequently benefits (McIntyre and Ataguba 2010).

A further problem is that usually the main respondent, most frequently the household head, is requested to report on service utilisation by all members of the household. This can also lead to proxy-reporting bias, particularly where the household head is male and may not be adequately informed about the details of service use by children as they are not the main caregivers.

Yet another potential problem is accurately estimating the number of people using inpatient services in household surveys, since hospitalization is a rare event. It is frequently not reported at all or under-reported because household surveys are often not designed to capture such events. In order to address this issue, the recall period used in household surveys for inpatient care is usually 12 months compared to that of outpatient visits which generally has a recall period of between two weeks and one month (Demery 2000).

Seasonal adjustments to utilization can be made in cases where there are seasonal variations in illness and health care use by considering the month within which the survey was conducted and assessing total utilization in health facilities per month within the year of the survey. A seasonality index is calculated and the index multiplied by utilization rates from the survey (McIntyre and Ataguba 2010). In the McIntyre and Ataguba study, they found that the seasonal adjustment did not affect their utilization results, but this may not hold for Ghana where utilization goes up during the malaria season between July and September.

3.5.3 Cost of service

The next step is to estimate the unit cost of service at various levels of care. Data for this is obtained from the sector providing those services. In health, the Ministry of Health's expenditure data from health facilities can be used or National Health Accounts data if it is available. In BIA, actual official reported recurrent expenditure data and a not budget is required. It does not include capital spending (Castro-Leal, Dayton et al. 2000; Demery 2000). Authors have typically only used recurrent expenditure. The reason for this is that capital expenditure yields benefits that extend over a much longer period than one year, which is the time period used in a benefit incidence analysis.

In estimating the cost of care, it is important to distinguish clearly between the various levels of care, for example, teaching, regional and district hospitals and primary levels of care. In the case of hospital care, a distinction is also made between hospital inpatient care and outpatient care.

It is also important to distinguish between private facilities and public facilities. The challenge in estimating the unit cost of private facilities is that private providers may not provide information about expenditure on their services, due to the competitive value of this information.

After estimating the expenditure on services at the facility at a specified level and estimating utilization levels, then an estimation of the cost per visit to that facility at that level can be deduced. The resulting estimate is the average unit cost of providing the service at that level. This is the standard approach used by many analysts (Van De Walle 1998; Castro-Leal, Dayton et al. 2000; Davoodi 2003; Mahal 2003; McIntyre and Ataguba 2010).

The literature acknowledges the challenge of estimating unit costs due to a lack of data. Often it is difficult to find data on public spending at peripheral levels. Even when it is available it may not be in the form the analyst requires. For example, spending at the facility level may not have been disaggregated by outpatient and inpatient care. In addition to that, spending at the lower levels may be difficult to obtain due to various factors, one of which is that spending is sometimes done by higher levels on behalf of peripheral facilities and the facility in question may not have expenditure data for their level. In Ghana for example, sub-district expenditure is done by districts on behalf of sub-districts. These challenges notwithstanding, it is possible to gather reliable expenditure data on public facilities at the national level in Ghana. However, obtaining expenditure data from private facilities is always a challenge.

The next section looks at benefit incidence studies in some countries (see Appendix 1 for more details of the studies).

3.6 Previous benefit incidence studies

All recent benefit incidence studies conducted in low- and middle-income countries were included in the review. While the emphasis is on benefit incidence analysis within the health sector, studies that considered benefit incidence in the education sector were included in the

summary table in Appendix 1 as these studies provide insights that are of relevance to other social sectors, and very often benefit incidence studies include both the health and education sectors.

Generally, benefit incidence studies point to the low benefit from public subsidies among poorer quintiles in both high- and low-income countries (Castro-Leal 1996; Castro-Leal, Dayton et al. 2000; World Health Organization 2008). Additionally, even when the poor use a service, it is mainly at the peripheral levels, i.e. primary health care, and not hospital or specialised care (Pearson 2002). In a comparative analysis of six African countries comprising of Ghana, Cote d'Ivoire, Guinea, Madagascar, South Africa and Tanzania, Castro-Leal, Dayton et al (2000) reported that the benefit incidence of public spending favours the richest in both primary and hospital care with the poorest receiving 4-17% of the value of the public subsidy and the richest receiving 17-48%. A recent study in South Africa showed similar trends (McIntyre and Ataguba 2010).

Similarly, a benefit incidence analysis of public health spending by Mahal (2003) in India produced results that were comparable to those of the comparative analysis of the six African countries. Here too, the results showed that public subsidies were not equitably distributed especially for those living in rural areas and in poorer states. Lanjouw (2001) produced similar findings in Indonesia.

By and large, BIA studies consistently find the poor benefitting mainly from primary level care. Van De Walle (1998:371) indicated that "the fact that survey data often tell us that the poor use basic health...services more intensely than the non poor tells us something even if we do not attempt to put a monetary value on utilization so as to arrive at an overall expenditure incidence picture".

While BIA gives a picture of how much each group within a population benefits from government spending, this picture is incomplete until the factors that influence this scenario are investigated. There have been suggestions that benefit incidence be supplemented with detailed analysis of the underlying interplay of factors that bring about use of publicly provided services

by different socio economic groups (Van De Walle 1998; Sabir 2003). This is because public spending reflects government decisions, but it takes private decisions of individuals and households to use these services (Castro-Leal 1996). This moves us into the domain of factors influencing the use or non-use of services provided by government for individuals, households and communities.

It is clear that, before one can benefit from any public subsidy the household or individual must decide to use the service. Non-use simply means no benefit. However, if intended recipients are not using the service optimally to claim their share of the subsidy, then there must be certain challenges that impede use of the service. Conversely, for those who use the service, there must be some facilitating factors that allow them to use the service. In gaining ones' share of social services such as health care, the position of each in the social hierarchy influences what you get.

The phenomenon of access to publicly provided services has been a long standing concern of many in developing countries (Van De Walle 1992). The suggestion is that income, cost, quality of service and opportunity cost of time away from economic activities such as travel time to a health facility affect the use of services (Castro-Leal 1996; Castro-Leal, Dayton et al. 2000). Meldau (1980:16) referred to a statement by the President of the World Bank, Robert S McNamara in 1972, that "too often these expenditures-on health, on transport…on education, and many other sectors-end up by benefiting the already privileged far more than the mass of the disadvantaged. This, in part, is because these services are more concentrated in the urban areas and better neighbourhoods."

Given these conditions, changes in government health budget allocations alone will not change these patterns; rather budget allocations must be accompanied by increased use of services by poor households (Castro-Leal 1996). To bring about a change in the use of health service by poor households for example, Castro-Leal (2000) suggested that we need to understand why the poor limit use of health facilities. He cited Gertler and Van der Gaag's study, that cutting travelling distance by half will increase use of health care services by about 96% in Ghana, indicating that those with low income are more sensitive to time in seeking care than those in the higher income group.

Distance also disproportionately affects the utilization behaviour of the poor in India (Mahal 2003). His study showed the association between use of a health care service and physical access. The poor tend to live long distances from medical facilities and the opportunity cost of seeking care is usually high (Ashford, Gwatkin et al. 2006). In Ghana's only benefit incidence study, overall, the poor gained 12% of health spending as compared to 30% by the richest. Again an inference was the distance to health services (Demery, Chao et al. 1995).

Other studies have found that the poor were more likely to cut back on seeking care due to price increases without corresponding improvements in the service quality and access (Van De Walle 1996; Van De Walle 1998; Castro-Leal, Dayton et al. 2000).

Despite these suggestions, a critical look at all the factors that influence these findings have not been explored in these studies, though some reasons for the patterns have been implied.

3.7 Access factors affecting benefit incidence patterns

Access is a key factor in enabling use of health care services among all groups. This section will illustrate factors that affect access to health services from both the perspective of users and providers of health care. These constraining or facilitating factors to equal access for equal need emanate from both the demand and supply side of health service provision. Access is therefore a function of both demand and supply side factors.

Traditionally BIA studies have not explored the factors influencing benefit incidence patterns in any detail. This constrains the ability to identify appropriate policy interventions to promote a more equitable benefit incidence. My study will consider these factors in detail and it is therefore useful to explore the literature on health care access and related issues as the basis of a framework for exploring factors influencing benefit incidence.

Access is an important factor influencing utilization of health services. The concept of access has been described as a complex notion (Goddard and Smith 2001). Several authors have stated that

the concept has often been equated to utilization of services though they agree that access is not the same as use of health service (Penchansky 1977; Goddard and Smith 2001; Hausmann-Muela 2003; Mackian 2003; Oliver and Mossialos 2005). The lack of clarity on the concept makes measurement of access difficult.

It is when the complex dimensions are carefully dissected that one can holistically measure access and thereby provide answers as to how to promote access to services that can bring about change and the participation of all in the health system (Penchansky 1977; McIntyre 2007; Thiede, Akweongo et al. 2007). McIntyre et al (2007) emphasised that access to care is not the same as service use. Additionally, they stated that access is the empowerment to use the health service. Thiede et al (2007) interpreted access as the freedom to use health services. One of the definitions which captures more comprehensively the various aspects of access is that by Goddard and Smith (2001:1151) when they referred to access as "the ability to secure a specified range of services, at a specified level of quality, subject to a specified maximum level of personal inconvenience and cost, whilst in possession of a specified level of information".

For this section of the literature review, I focus on the interaction between the health service and individuals or households in their engagement with each other. For almost every health service or supply factor that affect access, there is a corresponding community, individual or household or demand factor. For the poor to receive their share of health service benefits, an understanding of this relationship is important.

Key health service and community, household and individual factors run through all the literature and how they relate to each other to trigger access (Penchansky 1977; Goddard and Smith 2001; Hausmann- Muela 2003; Mackian 2003; Oliver and Mossialos 2005; McIntyre 2007; Thiede, Akweongo et al. 2007). Penchansky (1977) indicated that the interaction or relationship between provider and client attributes contribute to access. He referred to Donabedian's (1973) use of the phrase 'lack of fit' or in his expression the 'degree of fit' between the health system and clients to demonstrate the extent to which the health system and communities, households and individuals interrelate. The degree of fit describes the relationship between the two sides.

Consequently, for a continued relationship, not only must this interaction be strengthened by a deep understanding between the two but also the relationship must be kept alive. It is in some ways like a marital relationship. Avoiding break-up means a continued effort by both sides to establish a sustained relationship, constant communication where both sides contribute and the willingness to work at keeping the relationship going. Penchansky (1977) indicated that access involves the interplay of availability, accessibility, acceptability affordability and accommodation.

These dimensions of access come into play within specific contexts. A client within a specific context may find a service affordable but not acceptable, or acceptable but not affordable. In another context, a service may be acceptable but not available; it can also be available but not affordable. These depend on the specific context within which a potential user finds himself or herself and the health service context at a specific time (Thiede, Akweongo et al. 2007). I have chosen to categorise the dimensions of access into geographic, economic, social and cultural beliefs, health system organization, information factors. These are in fact similar to those of other writers. Economic factors looks at the same dimension as affordability, likewise geographical factors has similar correlation with availability and accessibility. Cultural factors have similar linkage with acceptability of health services.

3.7.1 Economic factors

The relationship between the health service and the clients with regards to economic factors refers to the cost of services on the part of the provider or health service and the ability to pay by clients on the other. Clients' ability to pay for services is one of the factors that determine their use of the service. Ability to pay has been one of the constraining factors for use of services by the poor especially. Castro-Leal's (1996) benefit incidence analysis of public spending in South Africa found that the poorest quintile's main reason for non-use of a health service was it being too expensive. Residents from poorer provinces in South Africa are more likely to get no health care than those in rich provinces because it is too expensive relative to households' resources (Castro-Leal 1996). Hausman-Muela (2003) also highlighted that cost of care can be a hindrance to seeking care especially among the poor. In the management of malaria in children under five,

one of the barriers to seeking prompt and effective treatment is the cost of care (WHO/HTM/TDR 2004). Oliver and Mossialos (2005) mention indirect financial costs such as travel time and foregone wages by the relatively poor as a deterrent to use of health services in developed countries.

The effect of the cost of care can be a significant burden on poor households. Hausman-Muela (2003) pointed out that, even if poor households spend less in absolute terms in seeking treatment, health care spending as a percentage of their monthly or annual income can be significant. Citing Schellenberg's (2003) study in poor Tanzanian communities, individuals with relatively higher socio-economic status were more likely to seek care for their sick children. Demery, Chao et al (1995) had similar findings when they looked at benefit incidence of health spending in Ghana; one of the reasons for non-use by the poorer quintile was due to lack of funds. Health care costs such as consultation fees, drug costs, laboratory tests, admission and theatre costs are deterrents to seeking care among the poor (Thiede, Akweongo et al. 2007). With regards to ability to pay, Russell (1996) and Hausemann-Muela (2003) indicated that even if health services are free, indirect costs such as transport costs, time off economic activities for the self-employed client, special food and under-the-counter payments are limiting factors to seeking treatment.

Payment mechanisms and options such as health insurance, availability of credit facilities, payment by instalments and in kind and the client's membership of a health insurance scheme, liquidity of assets and social network come into play here. If the client does not belong to an insurance scheme, does not have assets that can easily be turned into cash and no supportive social network, use of a health service is prevented or there is use but there are long term consequences for household livelihoods since health care expenditures could deprive families of meeting other essential needs (Russell 1996).

Explaining the differences in the uptake of preventive and health promotion services such as breast cancer and osteoporosis screening in the UK, Goddard and Smith (2001) made it clear that, though these services may be free, travel costs and time costs act as barriers in seeking care especially among women from lower social groups who have to use public transport and forgo

pay or annual leave for their time off thereby affecting their access to these free services. It has again been documented that much as caregivers are aware of poor advice from drug peddlers, when they take into consideration their limited time and transport and hospital costs, they still consult them (WHO/HTM/TDR 2004).

In Castro-Leal's (1996) study on the impact of health spending on poverty and inequality in South Africa, poor women were more likely than poor men to get no health care because it is too expensive. Therefore, the issue of gender differences in the control of household resources is also a factor that affects health service access.

3.7.2 Geographical factors

The geographical dimension of the relationship between the health system and clients has to do with location of the health facility on the one hand and the location of clients on the other. The processes that each has to go through to reach each other, especially on the part of the client if the service is static, can affect health service use. On the one hand, if the provider has to go on outreach or home visits, then knowledge about the layout of the community, availability of transport, ease and safety of travel will determine the willingness of providers to move into communities to provide services.

The other side of the coin is the location of clients, the availability and cost of transport and the opportunity cost of travelling to health services. When the client lives far from the facility, for example, the access constraint may relate to the willingness of providers to go on outreach services and the feasibility of the client meeting the provider at an agreed point convenient for both.

Availability of transport for both provider and client and the accessibility of roads have a relational concern. For example if transport is not available and affordable, access becomes a problem. Another provider factor is that of availability of a facility's own transport and if it is in working condition or not, the question of availability of funds within the health facility for providers to pay for private transport and the prompt payment of travel and transport allowances to providers if they use their own money, can be a deterrent to go on outreach activities.

The opportunity cost of travelling to seek care is an important factor that has implications for access by the community, family or individual. Demery et al (1995) in their study on the incidence of social spending in Ghana, found that higher opportunity costs of visits to urban facilities by rural clients mean that rural communities only visit urban facilities when they suffer serious conditions, which additionally are relatively more costly to treat. Agyepong (2008) reviewing Ghana's public social policy development and the implementation of Ghana's National Health Insurance Scheme attested to the difficulties faced by rural populations in accessing health services.

Sensitivity to time required to obtain care is more pronounced for people in the lower income quintile than those in the higher income quintile in Cote d'Ivoire. Castro-Leal et al (2000) citing a study by Gertler and van der Gaag (1990) found the same in South Africa where the poor and Africans in former homelands have a high opportunity cost in seeking medical attention and would therefore not seek care.

3.7.3 Organizational Factors

Policy directives of a health ministry specify the provision of a certain quantum of services, with a specific type and mix of staff to manage specific equipment and drugs, and serving a specified population size. Policy arrangements have a lot of implications for the community it serves. For example, the question is whether the services provided by the health facility address the prevalent diseases in the community. The type and severity of ailment of a client at a particular time and the health care services available will affect use or non-use of the service. If the organization of the health service is not in consonance with the potential clients, use is affected.

Epidemiological differences between urban and rural areas or the rich and the poor may influence policy on the arrangement and provision of services (Coburn 2007). For example the poor may suffer more from communicable diseases such as diarrhoea, respiratory infections or malaria whilst the rich may suffer more from non-communicable diseases. The health problems of the poor may require attention at the primary care level rather than at the hospital level and these may be taken into consideration by policy makers in the organization of services.

Organizational arrangements are important in framing a client's response to services (Gilson 2007). If the arrangement does not fit the client's situation, they simply may not use the service. Health service organizations are arranged according to policy directions, but the question here is how does this arrangement affect use by potential clients? Rosenstock (2005:20) in explaining why people use health services indicated that "ordinarily to change people is much more difficult than to change their environment, though the latter may itself represent no simple task" Similarly, Schneider (2006:16) also stated explicitly that, in health care programmes and service provision, the focus has been on technologies rather than on the relationships between people, on the 'hardware' rather than 'software' of service delivery. She suggested the removal of cultural and physical barriers to care and the creation of organizational cultures and negotiation between providers and clients.

Another organizational factor has to do with opening hours and the feasibility of the communities' use of the service at the specified opening hours with regards to economic and other social activities of the community. Will providers be willing to adjust operating hours to suit the community or would communities be prepared to adjust their activities during need to seek care? In Ghana for example, outreach activities for Child Welfare Clinics (CWC) are in some communities undertaken during market days near the local market to allow mothers with children and engaging in economic activities in the market to have easier access to immunization and child welfare services.

The arrangement does not only make the service affordable to mothers because they do not have to pay for transport to get to the service but also have the service brought to them whilst they engage in their economic activities at the same time. This gives credence to Mackian (2003:14) citing Evans and Lambert (1997) as describing women as health seeking strategists: "to reflect the complexity of the decision making processes that women face on daily basis, weighing up social, economic, practical, cultural and personal factors, and not simply in response to one-off isolated illness event…suggesting a purposeful action rather than an unreflecting, predetermined behaviour".

Policy recommendations made to the G8 Hokkaido Toyako Summit Follow-Up (Jimba 2009) emphasised the need to ensure adequate health human resources if we are to achieve the basic Millennium Development Goals (MDG). In its policy recommendations to the G8, Jimba (2009:27) stated that "the health workforce-that is the people who actually deliver clinical and public health services-is a fundamental element of any functioning health system and all countries have to deal with challenges of ensuring an appropriate supply and distribution of health workers, maintaining adequate levels of training, retaining health professionals, and managing their motivation and performance"

In that same report Jimba (2009) quoted the late WHO Director General J. W. Lee, when he stated that "every person, in every village, everywhere should have access to a skilled, motivated and supported health worker." (Jimba 2009:27). However, the movement of human resources in health to developed countries, vacancy rates in the public sector in some developing countries are as high as 30-40% (Schneider 2006) makes this goal impossible. This is confirmed by Mackintosh (2007) in her article on international migration and extreme health inequality where she observed that migration of health providers from low income and understaffed health systems worsens health services and conditions of employment.

The policy maker therefore has to figure out how to allocate human and material resources in the face of dwindling numbers of health staff. The understanding of clients about these problems of the health providers is important for both sides.

3.7.4 Perception and attitudinal factors

This category of factors has to do with perceptions, attitudes, behaviour, values and beliefs. Both clients and providers may have perceptions about acceptable personal characteristics of each other. Without appreciating each other's values on these, access to health services can be hindered. It deals with mainly social and cultural differences between the health services and its clients' and how these interact (Hausmann- Muela 2003; McIntyre 2007). It affects how each perceives the other and triggers either positive or negative behaviours on both sides.

From the perspective of the provider, it relates to how the provider deals with clients because of clients' gender, age, ethnicity, religion, cultural attributes and socio- economic status among others. The other side of the coin is how clients perceive and deal with providers because of a provider's age, sex and other attributes. This has been called the acceptability dimension of access. The extent to which providers' attitudes are acceptable to the client is a key element for access. Gilson (2007) refers to this aspect as having close links with trust between providers and clients. It refers to characteristics of health provider's behaviour and how clients perceive these.

For example, health providers may treat men differently from women. The gender of a provider may be culturally unacceptable to some clients. Hausman-Muela (2003), looking at gender inequalities and health care seeking behaviour, made reference to Ojanuga and Gilbert's (1992) study where they found that health providers attend to boys and men better than women and girls. Again in Ghana for example, an observation made on the field on another study was that some health providers treated men who attended Maternal and Child Health (MCH) services, such as immunizations for their babies, earlier than women. Men did not join the queue. When asked for the providers' reason for such behaviour, they responded that it was a way of encouraging men to attend MCH services and a reward for men taking part in child care. Gender differences occur in access to health care in developing countries and especially among poor women. There are instances where women may not want male providers to attend to them in specific cases.

With regards to reproductive health, some providers prefer not to serve young adults with family planning services and likewise, young clients may prefer a peer to attend to them. Lack of sensitiveness of providers to the cultural beliefs of their clients is a factor that can hinder access to health care.

Gilson (2007) referring to Takahasi and Rodriguez's (2002) work, gave the example of minority groups in the US opting for suboptimal health care services due to perceptions about attitude and trust in better health care centres. Similarly, Thiede et al's (2004) study on who goes to the public sector for Voluntary Counselling and Testing (VCT) services, focus group discussions

with community members revealed the unacceptability of services by providers to some community members. In their study, respondents expressed a lack of trust in public sector health providers and mentioned issues of anonymity, lack of confidentiality, long waiting times and favouritism to some clients by providers. Additionally, the study showed that marginalised parts of townships, informal settlements and squatter camps are less likely to access services due to some of the concerns enumerated above.

The extent to which clients respect providers and comply with treatment and professional advice and the clients' expectation that providers will understand them should these not be forthcoming from clients due to their beliefs is a factor that can affect use. It is a two-way affair. Client's lay health beliefs as opposed to provider's biomedical perspective of disease come to the fore when dealing with clients with specific ailments. For example, the nature and type of ailment of a client and the health beliefs of this client will affect the decision to seek care in a public health facility or not. The client may opt for alternative providers such as herbalists, spiritualist or other private providers. For some ailments, use of orthodox drugs is perceived to be dangerous.

The general conditions of work of health providers affect the relationship between providers and clients. Workload due to their dwindling numbers and poor remuneration affects the morale of providers. Schneider (2006) stresses that demotivated staff will not work to achieve organisational goals. Studies in Tanzania, found that not only are patients abused, but there is also the charging of illegal fees for personal gain and denial of emergency care for patients. Such attitudes dissuade clients from accessing services. Pressures of work and the feeling of abandonment by nurses can tend to encourage providers to stereotype some specific types of clients and exhibit negative attitude to such. The understanding of clients about the poor conditions of service and low morale of providers has direct links with how each perceive the other (Schneider 2006; Gilson 2007).

3.7.5 Information factors

Health provider's provision of information to communities and the community's involvement in and awareness of how the health service operates is important in influencing use of the services. Client's knowledge of health institutions is important in this respect. For example, client's

knowledge about the cost of care, eligibility and processes for exemptions, acceptable forms of payment, dates for outreach activities and location of the service should be promoted in communities. Clients' knowledge about arrangements of health services for example, directions to needed points of service within a health care facility, knowledge about opening hours, emergency facilities, waiting time and availability of appointments and the extent to which clients can accommodate these and their suitability to clients are important for making decisions about the use of service. Provision of information on these issues and community's involvement in arriving at the arrangement of services will enable better use of the services than when they have little knowledge about these issues.

In the same way, provider's prior knowledge about the layout of the community, their social and economic activities and their ability to pay creates a better understanding between providers and users. The provision of support by providers if patients are to make informed decisions regarding their care and adhere to treatment guidelines is important. One of the key elements is empowering clients through the provision of information on their treatment. (Schneider 2006). Differences in uptake of services may also be due to differences in provision of information and education among different groups. An example is empowering caregivers with accurate information to effectively treat uncomplicated malaria in children under five with correct drugs, increased promptness, compliance and correct dosage by caregivers (Ajayi 2008).

3.7.6 Summary of factors influencing benefit incidence

The table below shows the relationship between the health service and the community, in relation to these key categories of factors influencing health service access.

Table 3. 1 Relationship between health service and community factors

Health service (Supply side) factors	Community (Demand side) factors
Economic factors • Direct costs, consultation fees, diagnostic tests, drugs, documentation, special food etc. • Indirect costs- time spent, loss of income, opportunity cost. • Payment mechanisms-Payment options acceptable to health facility. • Availability of credit facilities, insurance requirements, payment by instalments, payment in kind.	**Economic factors** • Ability to pay for health services- Income of client. • Membership of insurance scheme. • Economic activity: self-employed, formal sector worker. • Degree of assets liquidity. • Social network. • Season • Time of ailment. • Perception of worth of service.
Geographic factors • Location of facility. • Willingness to go on outreach service. • Reimbursement of travel and transport, availability of official transport, availability and prompt payment of travel and transport. • Road accessibility and safety of providers. • Perception of travel time. • Perception of safety of road/path and possibility of someone accompanying provider to service points in the community.	**Geographic factors** • Location of individual, community. • Feasibility of meeting service provider at outreach point. • Availability of transport. • Distance to health facility. • Transport cost to service point. • Travel time and associated opportunity cost. • Road accessibility and remoteness of community.
Organizational factors • Policy directives on organization of health service provision and its responsiveness to community expectations • Type of health facility: Hospital, health centre, community clinic; type of equipment and drugs. • Personnel: mix, size, competence, range of service. • Opening hours: Availability of 24 hour service, limited opening hours.	**Organizational factors** • Expectations of community on provision of health services • Main diseases in the community, health needs of community, type of ailment, severity of ailment, state of ailment. • Appropriateness and feasibility of using service during opening hours • Availability and clarity of directions to service points

• Information on layout of the community: markets, residential, commercial areas • Availability of appointments, communication methods • Feasibility of changing time spent with clients in relation to staff numbers versus client numbers. • Staff development, staff morale, workload, working conditions, remuneration, motivation, salary.	• Ability to accommodate these arrangements and their appropriateness • Time spent with provider and continuity of service. • Understanding working conditions of health staff by community members, households and individuals.
Behavioural factors • Personnel characteristics: age, sex, tenure of provider, ethnicity, language, religion. • Expectation of and respect for professional advice. • Cultural sensitiveness to community beliefs • Attitude of staff. • Professionalism in providing service, ensuring privacy and confidentiality. • Biomedical perspective of disease.	**Behavioural factors** • Characteristics of population, client served: age, sex, ethnicity, language, socio economic status, religion. • Acceptance and compliance with advice. • Cultural beliefs and practices • Attitude of individual. • Trust in provider, confidentiality. • Lay health belief and practices.
Information • Information on layout of the community • Information about accessibility and safety of roads to community. Information about hard to reach communities • Conveying information to community about provision of mobile and static services and times. • Provision of information about ailment, service and treatment options available.	**Information** • Information on location of facility • Information about the accessibility and safety of roads. • Information about timing of mobile and static services and their convenience to community. • Knowledge and empowerment on adherence to treatment, service choice.

3.9 Summary

The above review of the literature has identified some gaps and deficiencies in published research which point to the importance of the work to be undertaken in this thesis. Firstly, from an empirical perspective, there have not been recent studies on benefit incidence in many African

countries in the last 10 years. For example, the only previous benefit incidence analysis in Ghana was conducted nearly two decades ago using 1992 GLSS data. Furthermore, there are important drawbacks in the way health service utilization questions are asked in the Living Standards Surveys, which are used for BIA studies in many countries. In particular, respondents are only asked about the use of services **if** they report having been ill. This means that use of preventive and promotive health services are not captured. The same applies to service use for chronic conditions as self-reported illness questions, which have a recall period of 2-4 weeks, are often perceived to relate to acute conditions. This leads to under-reporting of health care use, which will in turn translate into lower benefits from using health services. This finding has influenced the design of the household survey questionnaire in this study to ensure that comprehensive utilisation data are collected.

Another issue identified in the literature review is that most previous BIA studies only look at the distribution of benefits from public subsidies rather than the benefits of using care by looking at the whole health care system. This study will fill this gap as it looks at use within both the public and the private health care sectors. Within the context of the current focus on pursuing universal coverage, it is important to take a system-wide perspective as access to needed care can be promoted by drawing on the service provision resources of both the public and private health sectors.

Another key gap in previous BIA studies is that no comparison is made between the distribution of benefits of using health care and of needs for health care across socio-economic group. The implicit assumption within these studies is that the benefits from using health care services accruing to each quintile should be 20%. This is inappropriate if one is concerned with assessing equity in the use of health services, as equitable service use requires people should benefit from health services according to their need for care. This study will therefore evaluate the distribution of benefits from using health care within the context of the distribution of the need for health care.

Finally, there has been almost no attempt in previous BIA studies to explore the factors that affect the benefit incidence patterns that have been found. This study will, therefore fill an

important gap in the literature by looking in detail at the access factors (economic, geographical organizational, socio-cultural and behavioural and information) that may contribute to benefit distribution patterns, to identify possible interventions to promote an equitable benefit incidence pattern.

CHAPTER FOUR

METHODOLOGY

4.0 Introduction

The methodology chapter presents how benefit incidence was measured in this study. It provides information on data sources for the various components of the study. It indicates how the key components of conducting a benefit incidence analysis were estimated such as estimation of costs and utilization rates. It also presents a section on the analysis of both qualitative and quantitative components of the study. Study districts are described and the reasoning behind the selection of these districts. The chapter outlines the type of qualitative data collected to give insights into community and service factors that contribute to use or non-use of health care services. Lastly, but not the least, ethical issues on the study are raised and how they were dealt with are presented.

4.1 Defining the scope of the thesis within the SHIELD study

The data outlined in this chapter was collected as part of the SHIELD (Strategies for Health insurance for Equity in Less Developed Countries) project. This is a multi-country study involving three countries in Africa: Ghana, South Africa and Tanzania. The overall SHIELD study aims to evaluate the existing inequities in health care. The SHIELD study evaluated the current distribution of health care financing and benefits from using health services across socio-economic groups. The study also evaluated alternative scenarios for future health care financing reform in these countries in relation to their potential impact on financing and benefit incidence, their feasibility and sustainability and support or otherwise of key stakeholders. Additionally, the SHIELD study aims to develop policy recommendations that will most appropriately address the identified health system equity challenges.

The Research and Development Division (RDD) of the Ghana Health Service is the collaborating institution in Ghana working to implement the objectives of the SHIELD study. I

work in the RDD and was fully responsible for the benefit incidence component of the SHIELD study. A colleague was responsible for the financing incidence component.

The benefit incidence research presented here draws on three major sets of data:

- A household survey undertaken by the SHIELD team;
- Unit cost data for different health services.
- Qualitative data collected through focus group discussions and in-depth interviews.

A broad methodological approach was developed collaboratively by the overall SHIELD team, and while we attempted to ensure some consistency across countries, each country team was responsible for developing their own data collection tools.

I developed a conceptual framework as part of my thesis research, i.e. this was done independently of the overall SHIELD project. I designed, collected and analysed all unit cost data and qualitative data myself. In terms of the household survey questionnaire, while I worked with the Ghanaian colleague who was responsible for the financing incidence component on the general elements of the survey (e.g. demographic and socio-economic questions), I designed all elements of the questionnaire that related to the benefit incidence component of the study.

4.2 Study design

The study is a cross sectional study. It aimed at quantifying the benefit incidence from using health care in Ghana at one point in time (2007/08) across socio-economic groups. It employed mixed methods (i.e. both quantitative and qualitative methods). A household survey was conducted and secondary data was collected from health facilities and at the national level. Qualitative data was collected using focus group discussions, in-depth interviews and client narratives. The qualitative methods explored the factors that contribute to the benefit incidence patterns. The different methods used in the study complement each other. For example, the qualitative methods assisted in understanding why benefit incidence patterns are as they are in Ghana.

The household survey and qualitative data were collected in parallel. It was not necessary to undertake qualitative data collection first to inform the design of the household survey questionnaire as the household survey utilisation and socio-economic data required for a BIA is well documented in the literature. In addition, the themes to be explored in the qualitative research were identified from an extensive literature review and the conceptual framework developed on the basis of that review.

4.3 Overview of quantitative methods

Benefit incidence studies require the measurement of socio-economic status, utilization and unit costs of services (Van De Walle 1998; 2000; Demery 2000; O' Donnell 2008). These require the use of household surveys for the measurement of use and socio-economic status. The unit costs of services were arrived at using expenditure data from the national level.

4.3.1 Household survey

A household survey was conducted in six districts in Ghana, (the six districts are Atwima Nwabiagya, Berekum, Dangme West, Lawra, Kpeshie and West Gonja) in 2008. A description of the six districts is presented in the later section on sampling.

The household survey needed to have three key measures. They are socio-economic status, an indicator of health need and utilization of health care. As a result, the household survey asked questions that allowed the socio-economic status of households to be assessed (household expenditure, ownership of assets, etc). It also asked questions on key demographic and socio-economic characteristics of household members such as age, sex, educational level, household size, main occupation, employment status, source of income, ownership of residence, and characteristics of the residence.

To describe the distribution of health in relation to socio-economic status, the study also attempted to assess health status. There are several possible ways of measuring a population's health status via a household survey. For example anthropometrics can be used to indicate nutritional status in children but they are limited and are not adequate as a measure for adults' health status. In examining inequalities in the general health of a population, a measurement that is sensitive to a wide range of health problems in adults is required. Health is multidimensional

and therefore a measurement that encompasses all the different dimensions is required. Self assessed health (SAH) status is one of the ways of measuring the health status of a population. In the household survey, therefore to measure need, the main respondents were asked to assess their health status on a four point scale from *'very good', 'good', 'average' and 'poor'*(Nielsen, Siersma et al. 2008; O' Donnell 2008).

Utilization of health care services was also obtained from the household survey. The household survey had four questionnaires. The main household questionnaire asked questions about the characteristics of the household and insurance membership and asked if any household member had used any health services in the past 2 weeks, if any member has been hospitalized in the past year and if any household member had delivered in the past year. There were then 3 additional modules in the questionnaire: module 1 that asked questions about the use of any health services in the past two weeks; module 2 which asked questions about the hospitalization of any household member in the past year; and lastly module 3 which asked questions about pregnancy and delivery. If anyone had used services in the household and that individual was above 18 years, that person responded to the appropriate module in the questionnaire. Household members who had been hospitalized within the past year also responded to the relevant module of the questionnaire themselves, likewise women who were pregnant or had delivered in the past year. The main caregiver in the household responded to questions on use of health services and hospitalization of other members of the household if they were below 18 years. This reduced the problem of bias arising from proxy reporting.

Respondents were asked if they used any health service at all in the past one month. The utilization questions were not only asked if one has been ill or injured, and they asked about the number of times respondents had used health care services from a comprehensive list of different types of health care providers, both public and private for both preventive and curative care. Questions were specifically asked on hospitalization and the number of admissions within the past year.

Specific questions on use of maternal health services such as antenatal care and delivery services were also asked. Pregnant women were asked if they had undertaken antenatal care (ANC) visits

and if so where and the number of ANC visits before delivery. For women who had delivered in the past year, they were asked about their place of delivery.

Respondents who had used any health facility were asked to provide the name of the health facility they visited and the number of times they visited the facility. The names of the facilities they provided made it possible to identify the level of care and identify whether the facility was public or private. The measurement was not only for one visit to a facility but the total number of visits within the past month for outpatient care and the total number of admissions in the past year for inpatient care.

This was disaggregated by type of provider for both public and private sectors. The list included both formal and informal health care providers. Public providers included hospitals and primary care facilities such as clinics and health centres, whilst the informal providers included chemical sellers, pharmacists, traditional birth attendants, drug peddlers and traditional healers among others. The household survey questionnaire is provided in Appendix 3.

In the survey questionnaire, all respondents who used any health care service were also asked if they had made any out-of-pocket (OOP) payments for specific services. This information was used to estimate unit cost of those who used private health care services.

4.3.2 Facility level data

Facility level routine data in the study districts on utilization was used in estimating seasonal indices for use of health care services within the three geographical zones of the country. Services statistics in public health facilities collected included utilization per month for the year 2007[7]. Within the period we stayed in the district, we recorded utilization of services per month from January to December 2007.

[7] 2007 was selected as the reference year because the survey data was collected in the last quarter of 2008 and 2007 was the year that both utilization and expenditure for most public health facilities were complete and available.

4.3.3 Secondary data at the national level

Secondary data at the national level was collected to estimate costs of public health care. In order to do that, I needed to collect expenditure and utilization data at the national level. Firstly, routine expenditure data was collected from the Policy, Planning, Monitoring and Evaluation (PPME) division of the Ministry of Health (MOH). The division has detailed information on expenditure from each regional, district and sub-district public health facility for the reference year (2007) and detailed information on the various expenditure items. Demery (2000) advises that expenditure data rather than budgets should be used in estimating unit costs.

Expenditure data from the MOH PPME Budget Unit were contained in spreadsheets with detailed worksheets on sources of funds and type (items) of expenses incurred from these sources. The funding sources were Government of Ghana (GOG) service funds, GOG administration funds, health fund (i.e. donors), internally generated funds (IGF) for services and IGF for drugs. IGF is revenue from user fees and from NHIS reimbursements. Expenditure data consists of four items. Item one covers personnel salaries, item two covers administration expenditure, item three covers service expenditure on drugs, consumables and training among others and item four consists of capital expenditure. Since capital expenditure is not included in this study I did not include expenditure on item four in estimating costs. GOG and IGF funds were expended on all items and Health Fund, also known as donor funds, were expended on only items two and three. IGF funds are kept at the facility and expended on salaries of casual staff, allowances such as fuel allowance for some staff, administration, drugs and capital expenditure in some cases.

Data for salaries of key health staff was not included in the MOH routine data available from the PPME. However, it included salaries of some staff (mainly lower level staff) paid from each health facility's internally generated funds (IGF). Salaries of health staff not paid from IGF were obtained from the payroll data supplied by the MOH's financial controller's office

For teaching hospitals, information on expenditure and IGF for the Korle Bu teaching hospital was obtained from the hospital's finance section and utilization obtained from the records section. For the Komfo Anokye teaching hospital, the information on expenditure and utilization

were obtained from their 2007 annual report. The annual report states IGF generated for the year and these were well categorized for the three recurrent expenditure items i.e. salaries, administration and service expenditure. The report included utilization data on outpatient visits and inpatient days.

Utilization data was obtained for each public health facility from the Centre for Health Information Management (CHIM) for 2007. These are disaggregated by outpatient attendance, patient days, admissions, births and deaths.

While the household survey was conducted in 2008, the most recent audited data on health care expenditure was only available for the year 2007. Information on total health service utilisation was obtained from CHIM for 2007 as well, to ensure that expenditure and total utilisation data was for the same year when calculating unit cost data. The use of household level utilisation data from 2008 and unit cost data for 2007 is not likely to have affected the benefit incidence analysis. Below is a table showing data items their sources and reference year.

Table 4. 1 Sources and year of data used in the BIA

	Data item	Information Source	Year
1	Expenditure and user fee revenue data at regional, district and subdistrict levels health facilities	Ministry of Health expenditure data	2007
2	Expenditure and user fee revenue data on teaching hospitals	Annual report of teaching hospitals	2007
3	Health service information system data on total utilization of health services	Center for Health Information and Management (CHIM) and Annual reports of the Ghana Health Service and facility data. Household survey	2007
4	Household level utilisation data	SHIELD household survey in 6 districts in Ghana	2008

4.4 Overview of qualitative methods

Qualitative research methods are useful in investigating complex issues. They help to achieve a deeper understanding of the complexities that come into play in decision making processes. Such

studies provide excellent insight into how people think and their beliefs and perceptions on how and why they make choices. Qualitative research additionally allows the researcher to describe the phenomenon in greater detail and provide verbatim information to provide good insights into how people think and act. It is an important complement to quantitative research, providing different perspectives and answering different questions on why people behave in a certain way (Varkevisser, Pathmanathan et al. 1991).

For example why would people live close to a health facility and still not seek health care when ill? Or why would people not register with the National Health Insurance Scheme despite the comprehensive benefit package and seemingly affordable premiums?

There are various ways of collecting qualitative research data including observations, focus group discussions (FGD), in-depth interviews (IDI) and case studies among others. Interviews and discussions using qualitative research methods are usually recorded and transcribed and arranged into key themes. Below is a description of the qualitative methods used in this study, namely FGDs, IDIs and case narratives.

4.4.1 Focus Group Discussions (FGD)

In conducting an FGD, the researcher brings together a homogenous group made up of 6-10 people to discuss a topic of interest freely and spontaneously. The discussion is facilitated by a skilled facilitator (Varkevisser, Pathmanathan et al. 1991). There is a notetaker who takes notes and prompts the facilitator on issues of interest that he/she might miss. A discussion guide is prepared beforehand but this does not have to be rigidly followed. In FGDs, participants are allowed to discuss the topic in a natural way and the facilitator comes in to make sure the discussion does not go off course.

In this study, qualitative studies were carried out to explore factors that impede or facilitate the use of health services. Focus group discussions (FGDs) were held with different groups of community members categorized into: rural and urban; those who live close to and far from health facilities; migrant farm workers; and non-members of insurance schemes. The discussion explored behavioural patterns around service uptake and factors facilitating or impeding the use of services such as cost of service, location of health facilities, availability and cost of transport

to health facility, type of service provided, convenience of opening hours, payment options available, information about services and perception of staff and services.

I facilitated the discussion in the local language of participants in communities where I speak the language fluently. In communities in the northern regions where I do not speak the language, I trained facilitators to guide the discussions. Discussions were tape-recorded after seeking permission from participants. Each discussion took approximately one hour (See FGD guide in Appendix 4).

4.4.2 In-depth interviews (IDI)

In general, in-depth interviews are used to get a good understanding of specific issues. Subjects are interviewed individually. The method is often used with managers and other subjects with busy schedules. There are also some respondents who may not want to share information with others and it would therefore be inappropriate to have a discussion with them in the presence of others. They provide information on real events and experiences rather than providing information on general issues.

In this study, in-depth interviews were held with health managers and health care providers on what enhances or impedes health service provision such as drug and staff availability, transport and equipment availability, funds and reimbursement and conditions of service of health care providers. Interviews were conducted in the English language with providers. (In-depth interview guides are provided in Appendix 5).

4.4.3 Client narratives

A client narrative is an in-depth study of one subject, or a few people, on a particular situation. The subjects are frequently chosen to represent a typical or an illustrative phenomenon. In relation to this study, client narratives were used to explore the decision to use facilities, clients' encounters with the health system, the process of care and outcomes. It was used with recent users to find out how they perceive the services they have recently used (See Appendix 6).

4.5 Sampling

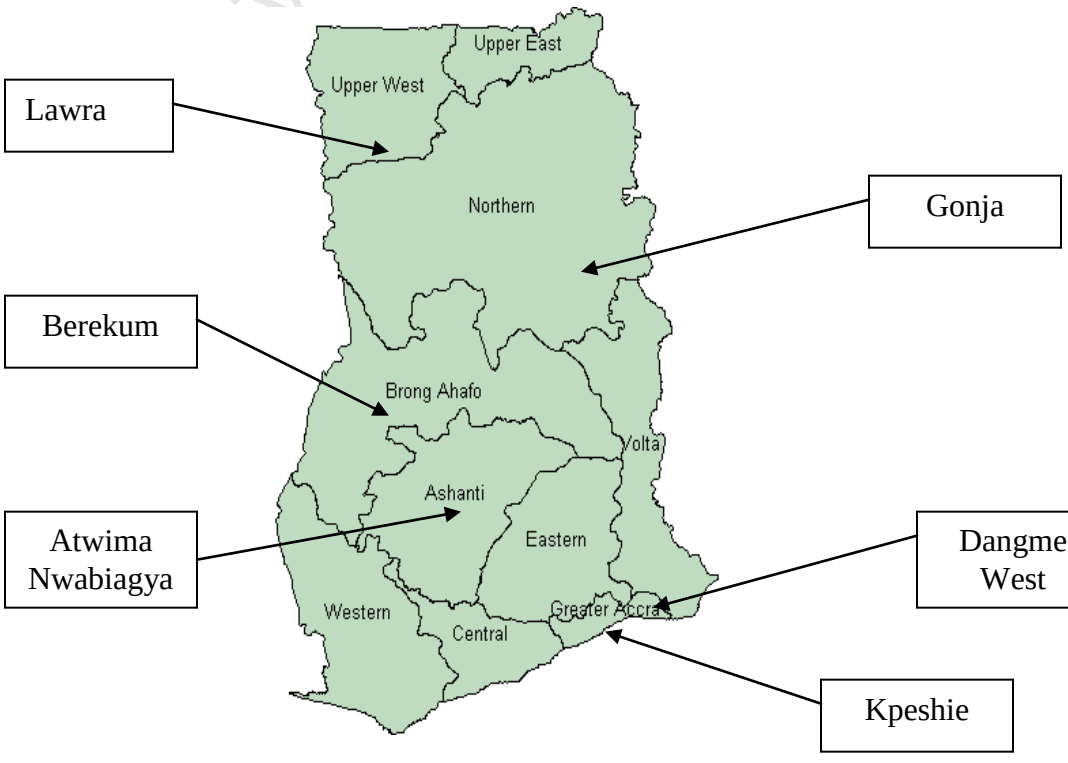
4. 5.1 Sampling of districts

The country is zoned into three distinct geo-economic zones. The northern savannah zone is the poorest, the coastal southern belt, which is more resourced, and the middle forest zone that is in between the other two zones. In each zone two districts were selected. [8] A key condition for selection was that one district should be largely rural and one largely urban in each of the geo-economic zones. Therefore two districts were selected from each zone. One largely rural and one largely urban district with a district health insurance scheme running at the time of initiation of this research were selected. These schemes were important because they are the new entities where the population can get financial protection from paying out-of-pocket when using a service. At the time of the data collection most districts had health insurance schemes running.

In the southern zone the two districts selected were the Kpeshie sub metro and Dangme West. In the middle zone Berekum and Atwima Ngwabiagya were selected and in the Northern zone Lawra and Gonja districts were selected.

Below is a map showing the selected districts. A description of each of the districts is provided in the next sections.

Figure 4. 1 Map of Ghana showing the location of selected districts



[8] The
distr
me.

4.5.2 Description of study districts

Each of the six study districts are described below.

4.5.2.1 Kpeshie

The Kpeshie district is an urban district and has a population of 466,613. The major economic activities in the district are fishing, carpentry and commercial transportation. There is a large population of formal and informal workers. It has about 36 health facilities. One is under the Ghana Health Service, twenty five (25) are private clinics and hospitals and the remaining ten are private midwifery centres. The only district hospital operating under the GHS is the La General hospital**.** The doctor-patient ratio is 1:52,315 and the nurse-patient ratio is 1:1,982.

4.5.2.2 Dangme West

The Dangme West district is one of the five administrative and political districts in the Greater Accra region. It covers about 45% of the land surface of the Greater Accra region and is mainly rural (GSS 2002). The population is estimated at nearly 111,935 (GLSS 2006). Communities with the largest populations are Prampram, Dodowa and Old Ningo with slightly over 5,000-6,000 people each. Most of the communities are small and widely scattered with less than 2,000 people. There is widespread poverty among the people who are mostly subsistence farmers, fishermen and petty traders. A handful of artisans and civil servants can also be found in Dodowa, Prampram and Asutsuare.

There are four health centres, three community clinics and three CHPS zones in the public health sector in this district. These facilities are complemented by one mission facility, three private clinics and two maternity homes. There are three diagnostic laboratories, each in the three largest communities. There is no hospital. Referral cases are handled by neighbouring districts. There are few motorable roads and reaching most communities is almost impossible during the rainy season.

4.5.2.3 Atwima Nwabiagya

The Atwima district is located in the Ashanti region in the middle and forest belt of Ghana. It is one of the largest districts in the Ashanti region. The district has two rainfall seasons each year

and food is abundant. The district capital is Nkawie and has four sub districts. They are Abuakwa, Akropong, Barekese and Asuofua. The district has a population of 158,989. It has one public district hospital and four health centres. It also has four private clinics and seven private `maternity homes. The doctor-patient ratio is 1:92,537 (GHS 2007).

4.5.2.4 Berekum

Berekum is one of the 19 districts in the Brong Ahafo region with a population of about 108,078. It has two rainfall seasons. The main economic activity in the region is farming and more than 70% of the population is engaged in farming. It is a major cocoa and timber producing area. It has three sub districts. The Holy Family hospital is a mission health care facility that has served the district for over 50 years. It is the only referral point for 21 other facilities. The district has 11 public health facilities of which three are functional CHPS compounds. It has 10 privately owned health care facilities.

4.5.2.5 West Gonja

The Gonja district is one of the eighteen districts in the Northern region. It has a population of about 200,374. It lies in the savannah zone of Ghana. The district is divided into six sub-districts. These are Damongo, Mole, Busunu, Daboya, Mankarigu and Bawena. It has an erratic rainfall pattern and experiences major storms leading to erosion and floods. The irregular distribution of the rainfall hinders agricultural activities. The dry season is characterised by the harmattan[9] wind, which is dry, dusty and cold. About 60% of the population is engaged in agriculture, livestock and fishing. Quite a number of the inhabitants migrate to the southern part of the country in search of economic activities. The West Gonja hospital is a 150-bed hospital located in Damongo. It serves as a referral centre for the health centres and is run by the Catholic Church. At the sub-district level, there are four health centres, three (3) clinics and one CHPS compound. One of the clinics in the Daboya sub-district has a community-initiated clinic manned by a village health worker.

[9] The harmattan is a dry and dusty West African trade wind. It blows south from the Sahara into the Gulf of Guinea between November and the middle of March. On its passage over the dessert it picks up fine dust particles.Wikipedia (2007). Harmattan. Encyclopedia Britannica

4.5.2.6 Lawra

The Lawra district has an estimated population of 101,119. About 83% of the population is engaged in subsistence agriculture. They are engaged in both crop and animal production. However, the soil is poor and the weather conditions harsh. There is some fishing along the Black Volta. Most of the youth in the district migrate to the southern part of the country to look for jobs. It has two district hospitals and eight sub-district public health centres and two Reproductive and Child Health (RCH) centres. It has three functioning CHPS compounds. The district has one private maternity home and one private clinic. It has 213 trained traditional birth attendants and 13 chemical sellers but most of these are located in the district capital Lawra with the rest in Nandom and Babile.

4.5.3 Sample size determination for household survey

At the time of going to field for the survey in August 2008, it was estimated that approximately 38% of the population were covered by the NHIS, and so assuming an absolute precision of $\pm$ 2.25% at the 95% confidence, I calculated a sample size based on the number of households in each of the six districts. I stratified the respondents according to the proportion of insured and uninsured. The proportion of rural/urban[10] and regional household sizes[11] as captured in the 2000 population and housing census report (GSS 2002) were also used to estimate the final sample population for the various districts.

According to Wayne (1987), sample size can be calculated through the following formula:

$$n = \frac{Nz^2p(1- p)}{d^2(N - 1) + z^2p(1- p)}$$

N: total population

Z: value (corresponding to the confidence level)

d: absolute precision

p: expected proportion in the population

n: number of households

[10] Urban proportion of district population (Atwima Nwabiagya 20.7%; Berekum- 54.7%; Dangme west 23.6% and Kpeshie 100% ; Lawra 13.8%; West Gonja 13.7%)

[11] Regional household sizes (Ashanti Region –Atwima Nwabiagya 5.3; Brong Ahafo-Berekum-5.3; Greater Accra-Dangme west and Kpeshie 4.6; Upper West-Lawra 6.4; Northern Region-West Gonja 7.4)

This gives a sample size of 2,980 households.

4.5.3.1 Sampling frame and units

Using the 2000 Population and Housing Census frame from the Ghana Statistical Service, a sampling frame was drawn from Enumeration Areas (EA,s) in the six selected districts. Enumeration areas (EAs) are small areas with a population size of about 750 and between 150-200 households on average. EAs have well defined boundaries represented on maps. They constitute the primary sampling units (PSU), while households within EAs constitute secondary sampling units (SSU).

A two staged stratified random sampling design was adopted[12]. A fixed number of 20 households per EA was used and given the sample size of 2,980 households, this gave us 148 EAs (i.e. =2,980/20) in the first stage of sampling. The 148 EAs were then apportioned to each district based on the proportion of the population in that district. For example (Berekum) has a population of (108,078), which forms 9.42% of the total population of the six districts therefore the number of EAs sampled in the Berekum district was 14 (i.e. 9.42% of 149 EAs). Berekum has an urban population of 54.7% and therefore the distribution of EAs between urban and rural in that district was 8 urban and 6 rural EAs. To get the number of households that was surveyed in urban and rural communities, the number of EAs in each location was multiplied by the 20 households per EA to give the number of households selected per EA. In this case 160 urban and 120 rural households were selected for Berekum. The same was done for the rest of the districts. Below is a table showing urban and rural samples for households in each district.

[12] Same as GLSS 2005/2006

Table 4. 2 Urban and rural samples for households in each district

			Number of EA's selected			No. of HHs selected		
Districts	**Population***	**Proportion urban****	**Urban**	**Rural**	**Total*****	**Urban**	**Rural**	**Total**
Atwima Nwabiagya	158,989	20.7	4	17	21	80	340	420
Berekum	108,078	54.7	8	6	14	160	120	280
Dangme West	111,935	23.6	4	11	15	80	220	300
Lawra	101,119	13.8	2	11	13	40	220	260
Kpeshie	466,613	100	60	0	60	1200	0	1200
West Gonja	200,374	13.7	4	22	26	80	440	520
TOTAL	**1,147,108**		82	67	149	1640	1340	**2980**

*2007 population from population projection estimates, Ghana Statistical Service

** Proportion urban population

*** assuming a fixed take of 20 HHs per EA

The EAs for each category (rural and urban) were selected using systematic sampling. For example, choosing eight urban EAs from a total of 56 urban EAs in Berekum was done by first randomly selecting an EA as a starting point; dividing the 56 urban EAs by the 8 gave a systematic pattern of selecting every 7th EA. Detailed maps showing all the EAs and key landmarks in a given district were made available by the Ghana Statistical Service (GSS) for field work. Secondly, in the field, the supervisors enquired about the number of houses in each EA from unit committee members. Based on that, the sample intervals were calculated by dividing the number of houses by 20 in each community. For example, since we needed to select 20 households, if there were 100 houses, we divided by 20 giving us 5 and therefore every fifth house was interviewed.

Thus 20 households were selected systematically from each EA to generate a total of 2980 households. They were stratified into insured and uninsured by the proportion insured in the table below. A filter question "Are you a member of a DHIS scheme?" was asked after obtaining consent from the head of household. If the household head responded that it's an

insured household, data collectors asked for their insurance card to establish that it was valid.[13] The operational definition for an insured household in this study refers to a household where either the household head or the spouse is insured with a valid insurance identity card. In Ghana, the household head and/or the spouse must be insured to qualify all their children under 18years for insurance coverage. If neither the head of household nor the spouse is a member of a DHIS scheme, the enumerator thanked the person, and moved on to the next household (according to the determined sampling interval). The aim was to reach 3000 households; however, 2986 households were reached and interviewed.

Table 4. 3 Distribution of population and households into insured and uninsured

Districts	Population	Insured population	Uninsured population	No. of HHs	Household Sample Size interviewed				
					Total	Insured		Uninsured	
						Rural	Urban	Rural	Urban
Atwima Nwabiagya	158,989	88,313	70,676	29,998	420	186	46	154	34
Berekum	108,078	65,413	42,665	20,392	280	75	94	45	66
Dangme West	111,935	51,257	60,678	24,334	300	98	39	122	41
Lawra	101,119	49,222	51,897	16,887	260	105	20	115	20
Kpeshie[14]*	466613	137,363	329,250	101,438	1200	0	354	0	846
West Gonja	200,374	45,173	155,201	27,078	520	96	21	344	59
	1,147,108	**436,741**	**710,367**	**220,126**	**2,980**	**560**	**574**	**780**	**1066**

4.5.4 Secondary data from MOH/GHS

In estimating the unit cost of health care at the different levels in the public sector, I did not sample rather, I included every facility that had complete data on expenditure and utilization for 2007 from the different MOH/GHS sources. In total, sixty-one (61) district hospitals with complete expenditure and utilization data for inpatients and outpatients were used in estimating the average unit cost for inpatient and outpatient health care for district hospitals, five (5)

[13] Validation of insurance identity cards were done because during the pre-test, some household heads and spouses who thought they were covered because they had insurance cards, on inspection, data collectors realized that some of cards had expired and therefore such households did not qualify as insured households.

[14] * Kpeshie is predominantly urban with no rural communities.

regional hospitals out of the nine such hospitals and the two (2) teaching hospitals in Ghana had complete data. In addition three hundred and thirteen (313) health centres and clinics had complete data on expenditure and outpatient visits as required in this analysis (Van De Walle 1998; Castro-Leal, Dayton et al. 2000; Davoodi 2003; Mahal 2003). (See Appendix 2 for public facilities included in the cost estimation).

4.5.5 Sampling for qualitative studies

4.5.5.1 Focus Group Discussions

I attempted to conduct 36 FGDs in total with about 18 in an urban area and another 18 in a rural area. I categorized the FGDS into those close to a public health facility and others farther away (about 8 kilometers) from a health facility. In addition I had discussions with migrant farm workers, formal sector workers and those who do not have insurance cover. However at the end of the field work, I had only been able to conduct 26 FGDs in total due to difficulties in getting discussants in mainly urban communities and some rural communities. Groups were divided into male and female groups in both urban and rural settings. Below is the number of FGDs conducted with the different categories of respondents.

Table 4. 4 Category of community members in focus group discussions.

Category of participant	**Urban**	**Rural**
Close to health facility	2	4
Far from health facility	2	5
Migrant farm workers	2	5
Formal workers	2	0
Uninsured	2	2
Total	**10**	**16**

4.5.5.2 In-depth interviews

For the in-depth interviews with providers, I intended to conduct 30 with health care providers in the six selected districts, comprising of 5 providers in each district made up of a mix of managers and providers of static and outreach services. By the end of the field work, I had been able to interview 29 health providers made up of clinical staff, accountants, hospital administrators, outreach providers and private providers (See Table 4.5).

Table 4. 5 Respondents in in-depth interviews

Category of respondent	Number
Clinical staff	12
Accountant	1
Outreach provider/CHPS provider	8
Private provider	3
Administrators	5
Total	**29**

4.5.5.3 Client narratives

Two case narratives were conducted with respondents who had recently used a health care service. Their permission was sought and they were asked to share their experiences on the service they received. Two female clients were interviewed one in an urban community and another in a rural community.

Table 4. 6 Client narrative

Category of respondent	Urban	Rural
Female client	1	1

4.6 Data collection and entry

4.6.1 Selection and training of research assistants

I trained thirty three (33) data collectors and three supervisors for two weeks. Field workers were graduates who have been involved in previous field work activities of the Research and Development Division (RDD). The objectives of the study were explained to them. I took them through an overview of the study, principles of interviewing, interviewer knowledge, skills and responsibilities to make sure that questions were asked correctly. The household questionnaire were first read in English and then in the various languages in the study districts. The tools were translated into the local language and back translated into English to make sure that questions were well understood and asked correctly.

The research assistants were grouped according to the languages they speak. The languages were mainly Akan, Ga, Dangme, Ewe, Gonja and Wala. I speak two of the languages (Ga and Twi)

proficiently and these are spoken in four out of the six districts and I therefore took part in the data collection in these districts.

For the qualitative aspects, I trained two research assistants in the facilitation of focus group discussions to assist me in conducting the FGDs in communities where I do not speak the language. I conducted the in-depth interviews and one research assistant took notes. In cases where respondents gave permission, interviews were tape recorded as well.

During the training sessions, role plays were conducted in the local language and each interviewer had the opportunity to take part, after which they received feedback from colleagues and myself on how to improve on their interviewing skills if necessary.

4.6.2 Pre-testing and data collection

Pre-testing of the tools was done in rural and urban communities and health facilities near to the offices of the Research and Development Division (RDD) in Accra. For the survey questionnaire, research assistants pre-tested the questionnaire in some urban and rural communities. After the pre-test, discussions were held on the acceptability and reactions of respondents to questions asked, how long it took to locate a respondent, willingness of respondents to answer questions, how much time is needed to administer the questionnaire, the wording of the questionnaire, sequencing of questions and accuracy of the translation and the necessary modifications made.

One group made up of eight research assistants and a supervisor went to the northern part of the country whilst another team of field workers, two supervisors and I started in one of the two middle belt study districts. After working together for 10 days, I divided the group into two and one group continued to collect data in the middle belt and the second group and I worked in the southern belt. Data collection took three months (July to September 2008).

4.6.3 Community entry

Appropriate community entry procedures were adhered to. District assemblies, district health directorates and community opinion leaders in the six study districts were informed about the study at an early stage. They were informed about the purpose of the study, the kind of data we

would be collecting and the duration of our stay in the community. They agreed to assist researchers in any way possible during data collection.

4.6.4 Fieldwork challenges

Many of the roads leading to rural communities were in a deplorable state and coupled with the rains rendered the fieldwork very slow and arduous. The more the team travelled towards hard to reach communities, the more difficult it was locate insured households. Though roads in urban communities were better, finding respondents was difficult since many had left for work and we had to make several visits. Recruiting participants for the focus group discussions was also a challenging task mainly in the urban settings. However, with the assistance of opinion leaders and key members of the communities, the different categories of people needed for the focus group discussions were recruited and informed about the venue and time a day before the discussion.

4.6.5 Field supervision and quality assurance

Supervisors and I checked questionnaires as they came in from the field. When any anomaly was identified, the data collector went back to the household to correct these discrepancies. I went with one or sometimes two of the research assistants to visit sampled district hospitals and public clinics and CHPS compounds to collect secondary data on utilization. In some cases, these institutions requested that they be given some time to collate their data and these were made available to the research team within three to five days. Figures from the institutions that did not seem correct were checked at the institutions. However, in some cases these were picked up when the team had left the field and therefore telephone calls were made to clarify and correct any inconsistencies.

4.6.6 Data entry

Data entry was done at the Research and Development Division by the data management team. Data was double entered and consistency checks were made.

4.6.7 Project management

The project was managed by the Research and Development Division of the Ghana Health Service. The director and I were responsible for all administrative issues on the project. Completed questionnaires and taped recordings of FGDs and in-depth interviews were kept under lock and key. The transcribed recordings were kept by the researcher.

4.7 Quantitative data analysis

4.7.1 Survey weights

In the household survey, population weights were generated and applied in all relevant estimations, to extrapolate the sample to better reflect the national situation. Weights were generated under the assumption that the distribution of the individuals in the household survey should replicate that of the national population as closely as possible.

In order to do this, the following variables were selected: sex, insurance status, and location (urban/rural). Basically, the distribution of these variables and their combinations were derived in such a way as to replicate their corresponding national distributions. For example, if there were x% of females in the Ghanaian population, the weights were generated to produce this fraction bearing in mind a combination of other variables (i.e. the distribution of a combination of the variables should replicate the population distributions as well). Also, if there are y% of females who are uninsured that live in the rural areas, the weights also reflected this proportion. The population distributions of these relevant variables were obtained from the statistical authority in Ghana.

To ensure robust weights, and also obtain the population distribution of the variables under consideration across the zones, the weighting scheme was done across the three Ghanaian zones (southern zone, northern zone, and middle belt zone). This means that the weights will replicate the population sizes of these zones and the distribution of the key variables across the zones.

4.7.2 Measuring socio economic status

In measuring benefit incidence, the population is categorized into socio-economic groups by some welfare indicator, from poorest to richest, aggregating them into groups of equal numbers in order to compare the distribution of benefits across these groups. This can be done by income, expenditure or assets or a combination of these.

I have chosen to use household expenditure as a measure of socio-economic status and not the asset index. This is what is used by the Ghana Statistical Service (GSS 2007) in the measurement of socio-economic status and therefore reasonable to use the same in this study. Also as

highlighted in the previous chapter, expenditure is likely to be a better indicator of the general socio-economic status than income, as expenditure is smoother over time than income.

The household was used as the unit of observation in measuring consumption. This facilitates the treatment of joint household goods such as housing as it would be difficult to assign consumption of such to specific individuals within the household.

Specific questions in the household survey questionnaire (see Section 6 of Household questionnaire in Appendix 3) were used. It comprised of a comprehensive list of household expenditure items that would be purchased within any the month. Thus it included questions on expenditure on frequently used items such as food, fuel for cooking and lighting, utility bills, expenditure on transport and rent. The variables in my household survey that collect data on general spending in a month were comparable to the frequent spending variables in the Ghana Living Standards Survey (GLSS). These monthly estimates we summed up and multiplied by 12 to give an indication of annual expenditure. The limitation of this approach is that expenditures are not necessarily completely smooth and so multiplying by 12 could result in either under-reporting the actual expenditure or over-reporting. However, this is the technique used by the Ghana Statistical Service in the construction of standard of living measures. Less frequently used items such as cooking utensils and farm inputs were treated as items bought once in a year. These were therefore multiplied by one.

Per capita consumption expenditure was then generated to reflect each household member's level of welfare. Households were then divided into five equal quintiles from the poorest to the richest.

4.7.3 Measuring utilization

One key element of the analysis was that we collected data on the total number of visits to each service provider rather than one visit as is the case in most household surveys that include questions on health service use. O'Donnell (2008) advises that the total number of visits reported in household surveys be multiplied by 12 if a one month recall period was used. However this has been improved by McIntyre and Ataguba (2010) who estimated seasonal indices and multiplied total visits by the seasonal indices rather than simply multiplying by 12.

In estimating the seasonal indices, information collected from facilities over a full calendar year on number of visits per month were used. Average seasonal indices were estimated by type of facility/service. Seasonal indices were arrived at using routine utilization information collected from four facilities in the study districts that were able to provide data. I calculated the average seasonal index for the four district hospitals. Average of the four was assumed for West Gonga district hospital since data was not available for that district. The seasonal index for teaching hospitals and regional hospitals were calculated using data from Korle Bu teaching hospital and Ridge hospital respectively.

Utilisation differs across seasons due largely to the fact that malaria cases increase after the rainy season. As malaria accounts for about 40% of outpatient visits in Ghana, seasonal variations in service utilisation must be adjusted for.

Seasonally adjusted annual utilisation rates for the specified health facility or service (McIntyre and Ataguba, 2010) was obtained using the seasonality index obtained as:

$$SI_{jk} = \left(\sum_{i=1}^{12} U_{ik}\right) / \left(U_{jk}\right)_{\text{for each } k \text{ and}} U_{jk} > 0$$

Where: SI_{jk} is the seasonality index for month j, U_{ik} is the total visits to a specified facility k in month i, U_{jk} is the total visits to facility k in month j – i.e. the month of interest.

Data was collected over three months (July to September 2008). The seasonality index was calculated as the average during July to September relative to the average over the entire year. Each measure of utilization was multiplied by the seasonality index.

4.7.4 Estimating unit costs for public health facilities

To estimate unit costs to be used in the benefit incidence analysis, two main ingredients are required; recurrent expenditure and utilization (Castro-Leal, Dayton et al. 2000). Basically unit

cost is estimated by dividing total recurrent expenditure by utilization. In estimating costs for facilities that handle only outpatients, the estimation is simple; it is total recurrent expenditure in a particular year divided by the number of outpatient visits in that year.

For facilities with both inpatients and outpatients, calculating unit costs is a little more complex. Unit costs for both inpatient days and outpatient visits have to be calculated. As indicated previously, I obtained expenditure and utilization from a number of different sources (see 4.3.2 and4.3.3). Only those facilities for which full recurrent expenditure and utilization data could be obtained were included in the data set. In this study capital costs were not included. As mentioned above in Chapter 3, authors have typically only used recurrent expenditure. The reason for this is that capital expenditure yields benefits that extend over a long period other than one year, which is the time period used in a benefit incidence analysis. I have adopted this standard methodological approach of focusing only on recurrent costs in my research.

The funding source and expenses were located for each item for each health facility. The table below indicates funding sources from which the three recurrent items were expended.

Table 4. 7 Expenditure items and funding sources

Item 1	MOH/PPME Budget Unit had information on item 1 for casual staff not on core GHS staff list i.e. casual staff hired by institutions Financial controller had information on each facility per month and this was multiplied by 12 and converted to new Ghana Cedi and carried over to main spreadsheet for each health facility
Item 2	MOH/PPME Budget Unit had full information on GOG, health fund and IGF
Item 3	MOH/PPME Budget Unit full information on GOG, health fund and IGF

I developed a master excel data sheet with information from the MOH/PPME Budget Unit. The data from all sources were inserted at their appropriate expenditure columns including information from the financial controller's office on Item one, that is GOG expenditure on salaries of all core staff.

The sum of basic monthly salaries [15] for staff in each facility in the old Ghana Cedis were converted into annual salaries by multiplying by 12 and then divided by ten thousand Cedis (Gh 10.000). This was because in July 2007 the Ghana government redenominated the old Ghana cedi which saw four zeros slashed off the face value. Therefore Gh 10,000 old Ghana Cedis is equivalent to one new Ghana Cedi (Gh 1).

The next step is apportioning total expenditure into unit costs for outpatients and inpatients for hospitals since they provide both services. The problem here is estimating cost per outpatient visit in relation to cost per inpatient day. In the literature this has often been done by using the assumption that an outpatient visit is equivalent to a third of an inpatient day (Adam and Evans 2006).

However, Lombard (1991) in his modelling of net expenditure of hospitals in the Cape Province in South Africa showed that on average the cost of a single outpatient visit is equivalent to 43% of the cost of an inpatient day in small hospitals but increases to 70% in academic and specialist hospitals. He concluded that using 33% as the proportion of outpatient visit to inpatient day for hospitals is inadequate.

Recently, Ataguba (forthcoming) conducted regression analysis similar to that of Lombard (1991) on data on health care utilization and expenditure in all public hospitals at different levels in South Africa, controlling for relative size of each hospital. He found that in South Africa, for public hospitals the cost of one outpatient visit was equivalent to 0.37 of the cost of an inpatient day in district hospitals, 0.42 in regional hospitals and 0.56 in the case of provincial or central hospitals. As Ghana does not currently have adequate data to undertake comparable analysis, the South African ratios were used in preference to assuming an arbitrary ratio of one-third for all levels of hospital. A sensitivity analysis was conducted using the uniform one-third ratio to assess whether this impacted on the findings.

The South African ratios of an outpatient visit to an inpatient day for types of health facility are shown in the table below.

[15] Basic monthly salary is consolidated and includes allowances, staff overtime and pensions.

Table 4. 8 South Africa's ratio of the cost of an outpatient visit to an inpatient day by type of health facility

	Type of health facility	Ratio
1	District Hospital	0.370986
2	Regional Hospital	0.417997
3	Provincial/ Central Hospital	0.562002

Source: (McIntyre and Ataguba 2010)

The following equations were used to calculate inpatient and outpatient unit costs. A ratio of 0.37 was used for district hospitals, 0.42 for regional hospitals and 0.56 for teaching hospitals.

Cost of inpatient day = Total expenditure ÷ [Inpatient days+ (ratio × OPD visit)]

Cost per OPD visit = Total expenditure ÷ [OPD visits + (1/ratio × IP days)]

4.7.5 Average length of stay

In estimating cost per admission it was important to know the average length of stay (ALOS). For that, information in the GHS (2007) annual report was used. In the report, the average length of stay for all public hospitals in each region excluding teaching and psychiatric hospitals was used. Below is a table with ALOS by region. For the five regional hospitals included in the estimation of unit cost for regional hospitals, the ALOS in those regions were used for the calculation. For district hospitals the national average of 4.05 was used. In the calculation for teaching hospitals, the ALOS for Komfo Anokye Teaching Hospital (KATH) was 9, therefore the same was assumed for Korle Bu since information on ALOS on Korle Bu was not available. The average length of stay was multiplied by cost per inpatient day to give the cost per admission.

Table 4. 9 Average length of stay in public hospitals (excluding teaching and psychiatric hospitals) 2007

Region	Average length of stay(ALOS)
Ashanti	3.7
Brong Ahafo	3.9
Central	3.9
Eastern	5.0
Greater Accra	4.7
Northern	3.0
Upper East	3.0
Upper West	3.7
Volta	5.7
Western	3.9
National average	**4.05**

Source: (GHS/PPME 2007)

4.7.6 Unit Cost for private hospital/clinic

Private facilities will not provide information on their expenditure. Therefore out-of-pocket payments made by those who indicated that they had visited a private facility in the household survey in the six districts were used an estimate of unit cost of private sector care. Unit cost were arrived at by summing up total OOP payments and divided by the total number of visits for each type of private provider. Many respondents who visited private hospitals or clinics were unable to differentiate private hospitals from clinics and therefore an average unit cost was calculated for private hospitals and clinics.

4.7.7 Measuring benefit

The unit cost of the service multiplied by the utilization rate for that service reflects the benefit to each socio-economic category (Van De Walle 1996; Castro-Leal, Dayton et al. 2000; Demery 2000; Davoodi 2003). In this study, the utilization rate based on all visits rather than simply a single visit during the recall period was multiplied by the unit cost of each type of service to estimate benefit (McIntyre and Ataguba 2010). We estimated the average number of visits per person per year, and were able to disaggregate these visits by level of care, making it possible to accrue benefits to users for the various health facility levels.

Two separate BIA analyses were undertaken. Firstly, an analysis of the benefits of public subsidies was undertaken. As indicated in the literature review, this involves multiplying the use of public sector services only by the 'public subsidy', which is equivalent to the unit cost of providing the service less user fees paid for the service (i.e. it only focuses on the cost component that is funded by government). Secondly, an analysis of the benefits of using any health service (i.e. whether a public or a private sector service to provide a system-wide BIA) is also undertaken. This involves multiplying utilisation of any service by its unit cost, irrespective of the financing source (i.e. whether funded from user fees, government or donor funds or by the NHIS). For the first analysis, data on user fees revenue for each type of service were drawn from the Ministry of Health expenditure data.

Benefit is presented as a percentage share for each quintile of total benefit. The analysis also considers the distribution of benefits across socio-economic groups by primary level care and hospital care. The distribution of inpatient and outpatient care benefits was assessed at the district, regional and teaching hospital levels. Regional and teaching hospital benefits were combined due to the lower utilization numbers at these levels. In addition, this study also analysed the utilization incidence of ANC and delivery services.

The box below further explains how measurement of benefit incidence is presented in the study.

Box 4. 1 Measurement of benefit incidence

Findings from the benefit incidence analysis will be presented using bar charts, concentration curves and indices and dominance tests. The reasons for these are that though grouped data by quintiles is good and provides a simple picture on how health care benefits are shared among quintiles, it does not provide distinct information on whether a distribution is pro-poor or pro-rich. The concentration curve however provides a more complete picture of the distribution of benefits (O' Donnell 2008; McIntyre and Ataguba 2010). Concentration curves are presented in relation to the Lorenz curve or the 45° line.

The Lorenz curve shows a graphical representation of the proportionality of the distribution of expenditure of households relative to the 45° line of absolute equality. Firstly concentration curves are compared with the diagonal line of equality and if the curve lies above the 45° diagonal line, it indicates that the poorest quintile gain more than 20% of the total subsidy and the richest quintile gain less than 20%. Secondly comparison can be made with the Lorenz curve. In this case, when the concentration curve lies above the Lorenz curve, it indicates that the poor is receiving a greater share of benefits than their share of income or expenditure. (Davoodi 2003)

If the values among the poorer socioeconomic group are lower, the concentration curve will lie below the line of equality. Conversely, when the curve is above the line of equality, the more concentrated the health variable of interest is among the poor. On the other hand, when the curve is below the line of equality the more concentrated the benefits is among the rich (Davoodi 2003; O' Donnell 2008). Analysts have shown that the extent of inequality cannot be immediately inferred from the concentration curve but the concentration index captures this to a large extent. The index quantifies the extent of inequality among the socio-economic groups and is directly related to the concentration curve. The concentration index is defined as twice the area between the concentration curve and the 45° line. Therefore in the case where there is no socio-economic related inequality, the concentration index is zero.

Concentration indices were computed using the convenient regression methodology (Kakwani, Wagstaff et al. 1997) as:

$$2s_r^2\left(\frac{x_i}{m}\right) = a + br_i + e_i$$

Where x_i is value the benefits for individual i, m is the average benefits, r_i is the weighted fractional rank of individuals, s_r^2 is the variance of the fractional rank, the OLS estimate b is the concentration index. The weighted fractional rank is

$$r_i = \sum_{j=0}^{i-1} w_j + 0.5w_i \quad \text{with} \quad w_0 = 0$$

Where w_i is the relative sample weight (i.e. scaled to sum up to 1) and observations are sorted in ascending order of living standards (Lerman and Yitzhaki 1989).

The principle is that the index takes a negative value when the curve lies above the line of equality, and is concave rather than convex. In such cases it indicates a disproportionate concentration of the health care variable (health care benefits), among the poor. Therefore the health care variable is said to be pro-poor when the concentration curve is above the 45° line, and has a positive value when it lies below the 45° line, in such a case it indicates a pro-rich distribution (Davoodi 2003; Mahal 2003; O' Donnell 2008; Davoodi, Tiongson et al. 2010).

In cases where concentration curves cross each other or the line of equality Davoodi (2010) suggests that dominance tests that compares how close distributions are in a statistical sense be carried out. Dominance tests were therefore conducted in this study in such cases.

4.7.8 Measurement of need

The question that has so far not been responded to is how this benefit is related to need. Goddard and Smith (2001) noted that many studies on equity or inequity have paid only scant attention to the concept of need and several assumptions are usually made, one of which is that "levels of need are the same in each group being studied, meaning that no explicit consideration of need is necessary"(Goddard and Smith 2001:1150). O'Donnell (2008) pointed out that "the poor tend to suffer higher rates of mortality and morbidity than do the better off however they often use health services less, despite having higher levels of need" (O'Donnell 2007). It is therefore important that the share of the each group's benefit is measured relative to their need for health care services to see if benefits are appropriate given the distribution of the burden of ill-health (McIntyre and Ataguba 2010).

There are diverse ways of measuring need however; self assessed health status is often used as a simple measure of assessing health status by asking the question "*How would you rate your health in general?"* In this study, this was recorded on a four point scale: *'very good', 'good', 'average' and 'poor'.*

These multiple response categories were dichotomised. Therefore those who responded '*very good' and 'good'* were categorized as 'good health' and the responses '*average' and 'poor'* were categorized as 'poor health'. Need was then measured as a percentage of individuals who rated themselves as having poor health by socioeconomic group.

4.7.9 Maternity service need measure

The use of two key maternal health services was assessed. They were ANC attendance and place of delivery by pregnant women. The measure of need for maternal health services was pregnancy in the various socio-economic groups.

The study looked at need in relation to benefit. For example, I looked at whether each quintile's percentage share of benefit was more or less than their share of need. The interest here is if there is equity in the distribution of benefits across the quintiles relative to their respective share of need. Data on need was analysed using STATA.

4.8 Qualitative data analysis

Content analysis is a commonly used qualitative research technique. It focuses on the contextual meaning of the text (Hsieh 2005). It compares with other methods such as thematic synthesis where themes are developed by constantly comparing texts and their contexts (Thomas and Harden 2008; Barnett-Page 2009). Thematic synthesis is used in the analysis of focus group discussion, in-depth interviews and the case narratives (Thomas and Harden 2008). In this study, emerging themes from the transcripts were carefully examined and classified into categorized themes and coded. The Maxqda software was used in analysing the qualitative aspect of the study. The Maxqda software allows coded texts to be retrieved easily, and it includes memos where the analyst can make notes. It is good for data organization and retrieval, allows easy and efficient retrieval of quotes and is fast and user-friendly; it is easy to navigate the text. The software is very useful in searching for key words in the text.

Qualitative data were transcribed from the local language to English. A sample of the tapes were listened to and checked whether transcriptions were well transcribed. The transcriptions were coded using themes and sub-themes that correspond to the issues under study (See conceptual framework in previous chapter).

The qualitative aspect of the study is looking at factors that facilitate or impede the use of service. I identified key themes using the conceptual framework which was developed on the basis of the literature review. These themes were economic, geographical, behavioural, organizational and informational factors from both the community and provider perspective. Under these broad themes, there were sub-themes. For example under economic factors in relation to the community, there were sub-themes such as ability to pay, cost of service, transport cost, payment options available at the point of care and coping mechanisms.

From the provider perspective there are corresponding themes such as cost of service, payment options acceptable to the health facility, availability of credit facilities, insurance requirements, payment by instalments and payment in kind for example.

These themes were linked with type of respondent in the focus group discussions by residence and sex and the in-depth interviews by type of provider such as administrators, clinicians and outreach providers. The coded transcripts were loaded into MAXqda 2007 software to facilitate easy analysis of voluminous information from qualitative data.

4.9 Ethical clearance:

Ethical clearance was obtained from the Ghana Health Service Ethical Review Committee (GHS/ERC) in Ghana and the Research Ethics Committee (REC) of the Health Sciences Faculty of the University of Cape Town. Both committees approved the research proposal and gave clearance for the study to be carried out.

4.9.1 Ethical issues

Participants of the study were informed about the purpose of the study, risks and discomforts and benefits that they may experience during our interaction with them. They were assured of anonymity and that information received from them would not be shared with any other person but would be used for research purposes only. Introductory letters and the objectives of the study and the type of data needed were clarified and consent sought before any data was collected in all health facilities. For the household survey, the study team contacted local chiefs, community leaders and heads of households and permission was sought from them. All protocol for community entry was adhered to and community cooperation solicited. They were given feedback on the progress of work at agreed upon intervals.

Informed consent was sought from household heads, pregnant women, and caregivers and, sick persons before interviews were conducted. Before any focus group discussions or interviews were conducted, the research team explained the reason for their being selected for the interview, what the discussion would entail and those not willing to participate were given the option to leave and informed they will not suffer any consequences for their decision in anyway. They were told they had a free choice to participate or not, and to stop the interview at any time.

Participants were also informed about who to contact if they had any questions on the activities of the researcher and interviewers. They were assured that tapes containing any data will be kept at the Research and Development Division (RDD) and destroyed after three years. (See informed

consent form in Appendix 7). All study participants were interviewed in their language of preference.

4.10 Limitations

In selecting six districts out of about 138 districts in Ghana, the sample is not necessarily nationally representative of all districts in Ghana, particularly given that selection was based on districts with district insurance schemes running at the time the selection of districts were made. However, weightings were used to attempt to better reflect the national situation.

In developing countries such as Ghana, with a large informal sector, using household consumption expenditure as a measure of welfare is recommended but it has limitations. In the measurement of welfare, consumption over a period of one month may not be the same for another month. However, information on expenditure within the month prior to the data collection was extrapolated for all months within a year by multiplying expenditure for that month by 12 to provide an estimate of consumption expenditure in a full year.

Another limitation is that, since private providers were not willing to provide expenditure data for their services, the estimates of the cost of privately provided health care services were based on recall of what users said they paid the private providers. In estimating the cost for outpatient care, a recall period of one month was used while one year was used for inpatient care. Therefore it is possible that respondents may not provide precise amounts they paid, especially for inpatient care with a recall period of one year.

Finally, relative need for health care was measured by a single question on self-assessed health status. Although this measure is commonly used internationally, it does have limitations in the sense that it cannot capture all factors that may contribute to a capacity to benefit from health services. Reporting good or bad health can vary across different population groups and therefore the indicator may not give an exact reflection of differences in the prevalence of ill-health across socio-economic groups (O' Donnell 2008) as may be determined if assessed by a health professional. Also because the categories are dichotomized some information is lost due to the arbitrary cut-point for ‘good health’ and ‘less than good health’.

In order to compensate for this limitation, data from other surveys on the socio-economic distribution of key mortality rates, malnutrition, the incidence of diarrhoea etc. are presented. The measure of need for maternal health services, namely being pregnant, does not suffer from these limitations.

Another potential limitation is that benefits from the use of inpatient services were based on inpatient day unit costs. Unit costs may vary over the period of admission. This may lead to some inaccuracies in the estimated benefits from using inpatient care.

CHAPTER FIVE

FINDINGS

BENEFIT INCIDENCE OF PUBLIC AND PRIVATE HEALTH SPENDING IN GHANA

5.0 Introduction

This chapter presents results of the quantitative part of the study, on the benefit incidence of health spending in Ghana in 2007/08. It presents both the 'traditional' benefit incidence, which looks at the benefits from government subsidies on health care alone, and benefits from both public and private health spending which is referred to here as the system-wide benefit incidence analysis.

The chapter is using public sector costs and private sector prices in the benefit incidence analysis. The fact that the private sector services are more expensive, so it is giving weight to the use of private sector services, even though the health benefit of using a private sector service may be no different to that of using a public sector service. But what it does do is provide an indication of how financial resources for health care, or total expenditure on health care, is distributed across socio-economic groups due to the use of different types of health care services and across the public and private sectors.

Given that the health benefit of a service may be the same, irrespective of whether a public or private service is used, private services consume more financial resources per service, therefore it is important to look at how the use of private services by some groups skew the expenditure distribution.

Again this study is not measuring health benefits (i.e. benefit in terms of health status improvements) but benefits that arise from the use of health services which is influenced by quality of care provided. There is likely to be a difference in quality of care and hence benefits of using care between public and private sector services, given that the public sector is so heavily

under-resourced, so it is appropriate to reflect that by using the different cost levels in the two sectors.

The chapter also presents the results of a utilization incidence of two key maternal health services, antenatal care (ANC) and delivery services, across different socioeconomic groups.

Benefit incidence of public subsidies at all health service levels are presented. These levels are the primary care level, which includes all public sector clinics and health centres, as well as at the hospital level: district, regional and teaching hospitals. For hospitals, benefits by users are separated into outpatient and inpatient care.

This is followed by the distribution of benefits from using private sector health services, which consist of private hospitals and clinics and the use of chemical sellers, pharmacies and other home treatments. The benefits are also presented showing inpatient and outpatient care separately. This is followed by the findings of the combined public and private sectors or the system-wide distribution of health care benefits in the country. This system-wide BIA is of considerable relevance as the NHIS purchases service from accredited providers, both in the public and private sectors.

In addition, the distribution of the burden of ill-health is presented in terms of self-assessed health status. The distribution of health care benefits and needs of different socio-economic groups are compared to give a sense of how health care benefits are distributed relative to need, both for the public subsidy and the system-wide BIA.

Before the findings of the benefit incidence analysis are presented, the unit cost of each type of public and private sector service are provided.

Table 5.1 provides an overview of the key demographic and socio-economic characteristics of the households included in the SHIELD survey. This provides a good background understanding of the differences between the quintiles when reviewing the distribution of benefits.

Table 5. 1 Key characteristics of households

Key characteristics		Q1	Q2	Q3	Q4	Q5
		N (%)	N (%)	N (%)	N (%)	N (%)
Sex of HH head	Male	226 (42.88)	183 (40.49)	174 (36.17)	158 (28.37)	226 (37.17)
	Female	301 (57.12)	269 (59.51)	307 (63.83)	399 (71.63)	382 (62.83)
HH location	Urban	118 (22.39)	115 (34.29)	232 (48.23)	378 (67.86)	449 (73.85)
	Rural	409 (77.61)	297 (65.71)	249 (51.77)	179 (32.14)	159 (26.15)
Educational level of HH head	None	315 (59.55)	213 (46.10)	159 (32.32)	109 (19.19)	82 (13.49)
	Primary/middle	174 (32.89)	183 (39.61)	242 (49.19)	313 (55.11)	286 (47.04)
	Tech/secondary	34 (6.43)	47 (10.17)	64 (13.01)	112 (19.72)	160 (26.32)
	Tertiary	6 (1.13)	19 (4.11)	27 (5.49)	34 (5.99)	80 (13.16)
Occupational status of HH head	Employed	411 (77.69)	361 (78.14)	417 (84.76)	494 (86.97)	521 (85.69)
	Unemployed	101 (19.09)	89 (19.26)	62 (12.6)	53 (9.33)	55 (9.05)
	Pensioner	9 (1.70)	7 (1.52)	9 (1.83)	16 (2.82)	21 (3.45)
	Student/Apprentice	4 (0.76)	4 (0.87)	3 (0.61)	4 (0.70)	9 (1.48)
	Other	4 (0.76)	1 (0.22)	1 (0.20)	1 (0.18)	2 (0.33)
Mean age of HH head (in years)		49.28	47.87	44.32	43.62	41.71
Mean number of children[a]		2.89	2.58	2.38	1.90	1.13

[a] children defined as individuals less than 16 years of age

5.1 Unit cost of care

5.1.1 Unit cost of health services in public facilities (whether funded by government revenues or through user fees)

At the primary care level, the unit cost at clinics and health centres was GH□3.00. At the teaching hospital level, the unit cost for outpatient care is about twice that of the district and

regional hospital levels (see Table 5.2 below). The cost of providing inpatient services at the teaching hospital level is high. Salaries of the high calibre of staff and staff mix at that level are higher, as are other costs of care such as diagnostic equipment, drugs and supplies. Additionally at the teaching hospital level, average length of stay is more than twice that of regional and district hospitals, thereby increasing the costs per admission at that level.

Table 5. 2 Unit total cost of health service in public facilities

Level of care	Cost per inpatient day	Average length of stay	Cost per admission	Cost per outpatient visit
Teaching hospital	GH□70.43	9	GH□633.85	GH□39.44
Regional hospital	GH□47.52	4.06	GH□192.94	GH□19.86
District hospital	GH□44.36	4.05	GH□179.67	GH□16.41
Health centre/clinics	-	-	-	GH□3.00

5.1.2 Unit subsidy for health care in public facilities (Full cost minus user fee revenue)

Table 5.3 below shows the unit cost for health care in public sector facilities after user fee revenue is deducted. The unit cost was Gh□2.6 for the primary level care in terms of public sector health centres and clinics. The unit cost for district hospitals was Gh□13.4 and Gh□36.4 for outpatient and inpatient care respectively. At the regional and teaching hospital levels the pattern is the same. The inpatient cost is always higher than outpatient care costs.

At the teaching hospital level, revenue from user fees is large (compared to other levels of hospital) and forms almost 42% of total recurrent expenditure. When these are deducted, the unit subsidy per inpatient day is very similar to that of regional hospitals. Bigger hospitals are better resourced and generate more user fee revenue than smaller institutions in poorer areas (GHS 2008). This may explain the large user fees generated by teaching hospitals which are located in more resourced regions.

Table 5. 3 Unit subsidy (full cost minus user fee revenue)

Level of care	Subsidy per inpatient day	Average length of stay	Subsidy per admission	Subsidy per outpatient visit
Teaching hospital	GH□39.68	9	GH□357.11	GH□22.22
Regional hospital	GH□39.66	4.06	GH□161.00	GH□16.58
District hospital	GH□36.34	4.05	GH□147.17	GH□13.45
Clinics/health centres	-	-	-	2.59

5.1.3 Unit cost of health care services in private facilities

In the household survey, it was difficult for respondents to differentiate between private hospitals and clinics. Many respondents refer to clinics as hospitals, whilst others refer to hospitals as clinics. It was therefore difficult to distinctly categorize a private facility as a hospital or clinic. Both may have facilities for both inpatient and outpatient services. Therefore private hospitals and clinics were combined. Table 5.4 shows the unit cost of care in private clinics/hospitals and home treatment. Home treatment costs include payments made at pharmacies, chemical sellers and costs of other home remedies.

Table 5. 4 Cost of health service in private facilities

Private facilities	Cost per inpatient day	Cost per outpatient visit
Private hospital/clinic	GH□41.89	GH□20.20
Home treatment	-	GH□2.55

5.2 Benefit incidence solely from public subsidy in Ghana.

This section presents findings from the public subsidy BIA alone. It presents benefits from clinics and health centres and benefits at the district, regional and teaching hospitals for inpatient and outpatient care.

Findings from the benefit incidence analysis will be presented using bar charts, concentration curves and indices and dominance tests. The reasons for this is that though grouped data by quintiles provides a simple picture on how health care benefits are shared among quintiles, it

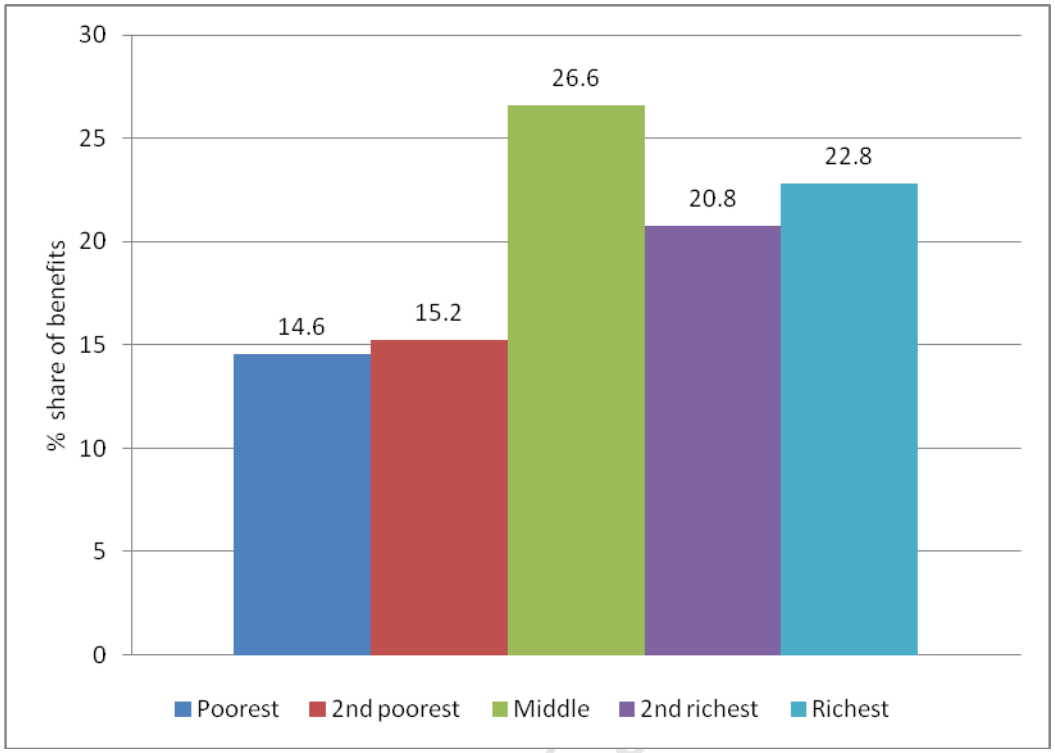
does not provide definitive information on whether a distribution is pro-poor. The concentration curve, indices and dominance tests, however, provide a more complete picture of the distribution of benefits (Davoodi 2003; O' Donnell 2008; McIntyre and Ataguba 2010). Also all graphs that show more than one curve are presented one on top of the other for clarity between different levels and types of care.

5.2.1 Distribution of benefits from public subsidy

Figure 5.1 below shows the public subsidy benefits for both outpatient and inpatient care in public sector health facilities after OOP payments have been deducted. The total public subsidy benefits accruing to the two richest quintiles exceed 40% whilst the two poorest quintiles account for less than 30%. The richest quintile accounted for 22.8% whilst the poorest quintile for only 14.6% of benefits. Davoodi and Tiongson (2010) emphasised that sub-Saharan Africa records the largest disparity between the richest and the poorest quintiles in the distribution of health care benefits.

The middle quintile also benefits more than other quintiles. This finding is similar to other studies (Davoodi, Tiongson et al. 2010). Davoodi and colleagues' analysis indicates that benefits accrue more to the three middle quintiles (i.e. Q2, 3 and 4), with an average of 64% of health care benefits accruing to these quintiles on average in Sub-Saharan Africa. These three quintiles received 63% of benefits in my analysis. While Davoodi et al. identify this as a source of concern and call for more research to understand this trend, they do not hypothesise about the possible reasons for this distribution pattern. There is a range of factors that could contribute to the observed benefit share of the middle quintile in Ghana. First, richer groups may be deriving a smaller share of benefits from public subsidies as they may be using private sector services as well. Second, the middle quintile may have a higher burden of ill-health than the richest two quintiles (see Figure 5.15) and may be appropriately using more services than richer groups. Finally, the middle quintile may be benefiting from the public subsidy more than the lower quintiles as a higher percentage of the middle quintile live in urban areas compared to high percentages of the poorest two quintiles living in rural areas, they have better geographical access and are better able to afford health services than the poorer groups.

Figure 5. 1 Distribution of benefits from public health care subsidies



The following section provides bar charts on how public subsidy benefits from outpatient services are distributed across socio-economic groups when separated by level of care.

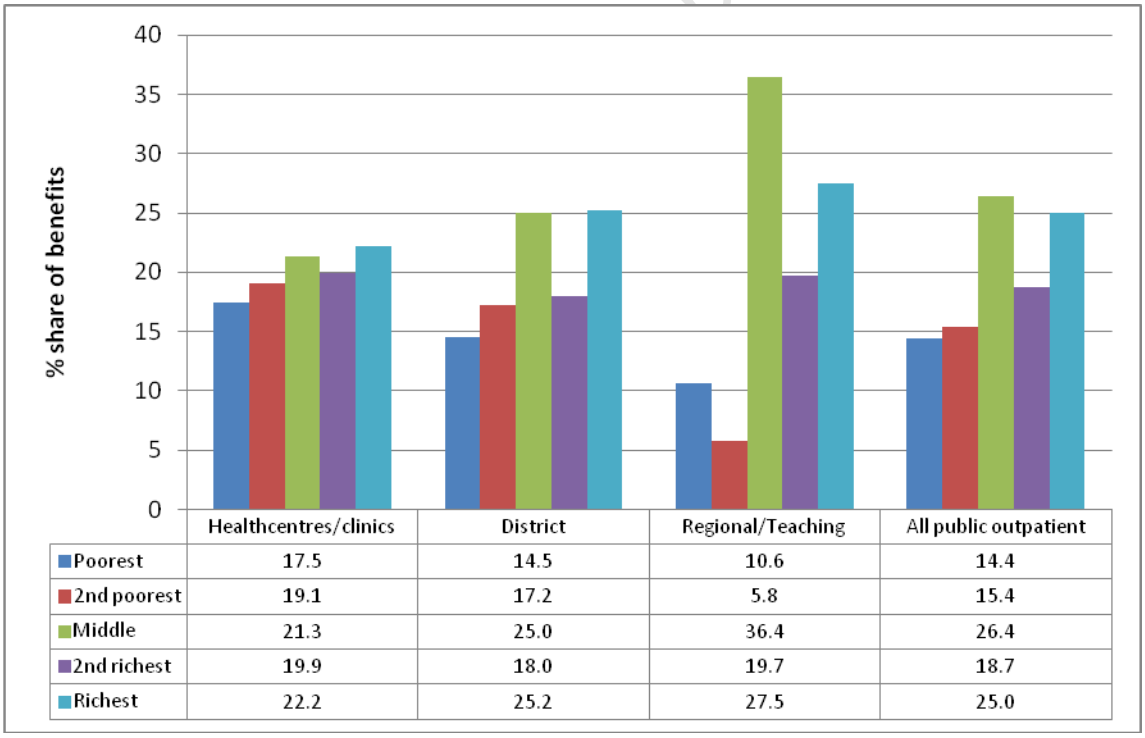
5.2.2 Distribution of benefits from public subsidies from outpatient services by level of care

The distribution of public subsidies by type of facility (teaching, regional and district hospitals and primary care facilities) for outpatient care is pro-rich. The richest quintile accrued more than a 20% share of benefits at all levels, confirming Demery's (2000) finding that, in Ghana, the dominance in the use of all facilities by the richest is marked. Public sector outpatient benefits at the primary care levels, i.e. in public clinics and health centres, were biased towards the rich but are fairly evenly distributed compared to benefits from hospital outpatient care; 17.5% to the poorest and 22.2% to the richest for primary care services (see Figure 5.2 below). These findings are consistent with other benefit incidence studies in 21 developing and transitional countries which showed similar results, with an average of 18.8 % benefits to the poorest and 19.7% to the richest for public primary care (Gwatkin, Bhuiya et al. 2004). Davoodi (2003) also found that primary health care is poorly distributed in sub-Saharan Africa with the poor gaining about 15%

of benefits at the primary level, while the richest gain about 22%-23%. He also found that overall spending on health services is on average pro-rich in sub-Saharan Africa.

These disparities are more pronounced when it comes to hospital care where the distribution is even more pro-rich. Hospitals are mainly concentrated in urban areas rather than rural areas where most of the poor live (Lanjouw 2001; Mahal 2003; Gwatkin, Bhuiya et al. 2004; O'Donnell, Van Doorslaer et al. 2005; Davoodi, Tiongson et al. 2010). This is especially the case for regional and teaching hospitals. These finding are in consonance with Demery's (2000) study and Lanjouw's (2001) statement that the urban/rural differences reflect the gains between the rich and the poor, given that the rich tend to use hospitals more than the poor and which are more costly and therefore the rich accrue higher benefits.

Figure 5. 2 Distribution of benefits from public subsidies on outpatient care at different levels

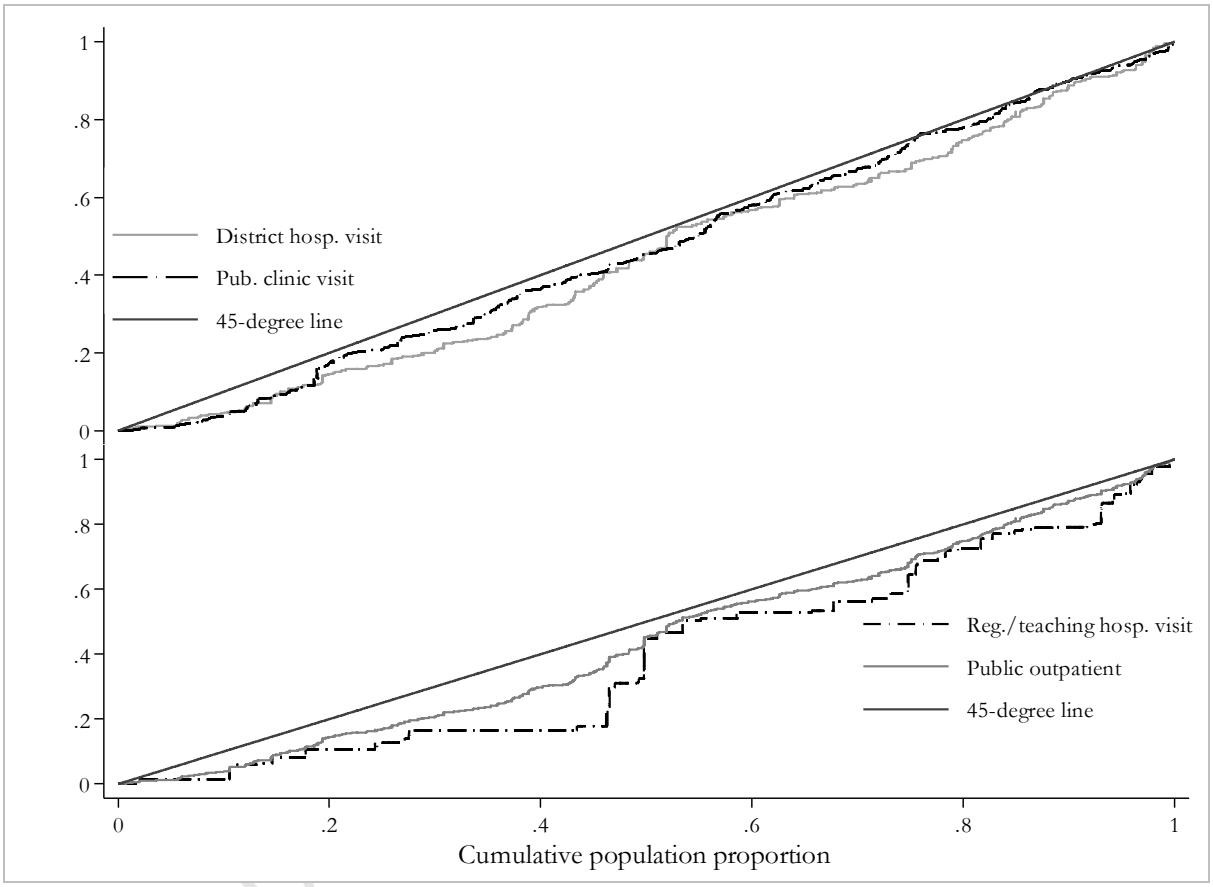


	Healthcentres/clinics	District	Regional/Teaching	All public outpatient
Poorest	17.5	14.5	10.6	14.4
2nd poorest	19.1	17.2	5.8	15.4
Middle	21.3	25.0	36.4	26.4
2nd richest	19.9	18.0	19.7	18.7
Richest	22.2	25.2	27.5	25.0

In this analysis, concentration curves for all visits to primary level care and outpatient visits at district, regional and teaching hospitals lie below the 45° line of perfect equality. Concentration

curves for public health subsidies for all outpatient services therefore show a pro-rich distribution (see Figure 5.3 below).

Figure 5. 3 Concentration curve showing public subsidy on outpatient visits by type of health facility



Dominance tests of the public subsidy benefit incidence for outpatient care at all levels indicate the dominance of the 45° line, confirming a pro-rich distribution of benefits. Concentration indices were positive for all levels of care (see Table 5.5).

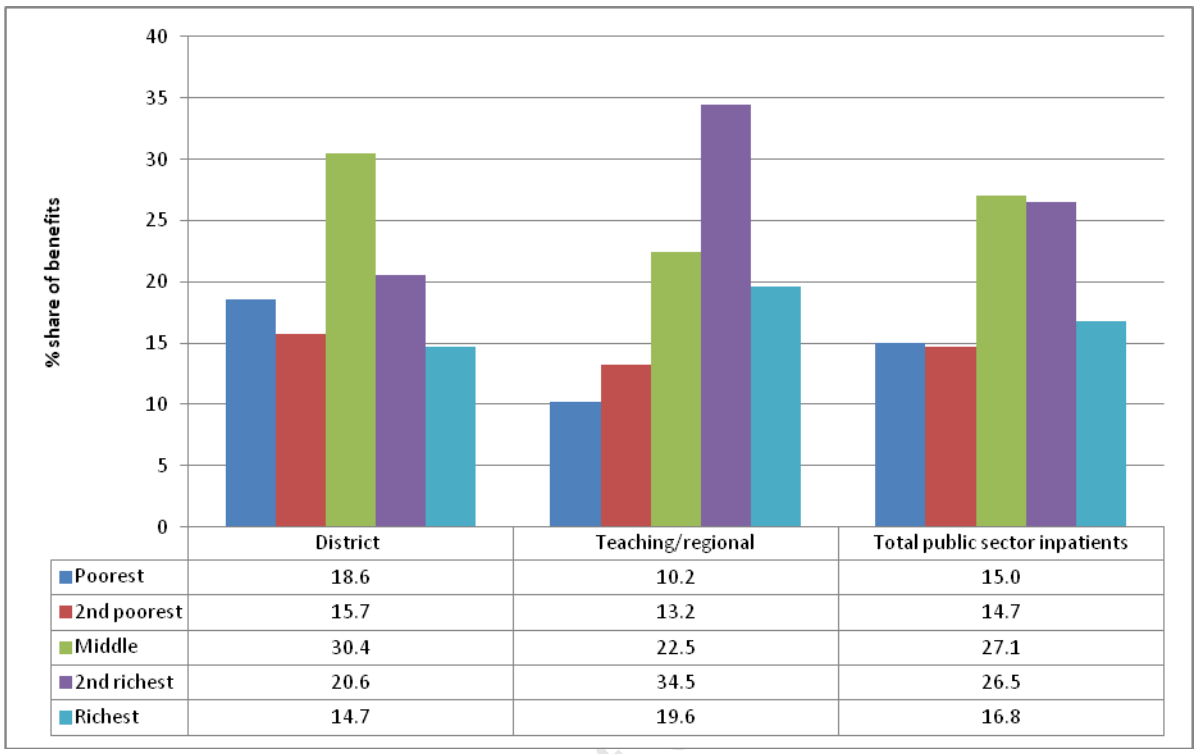
Table 5. 5 Concentration indices and dominance tests for public subsidy on outpatient care

Outpatient care	Concentration index	Dominance test
Teaching/regional outpatient	.2130448	45° line dominates
District outpatient	.1063907	45° line dominates
Public clinics	.0607081	45° line dominates
Total public outpatient	.1172144	45° line dominates

5.2.3 Distribution of benefits from public subsidies for inpatient care by level of care

Next the analysis looked at public subsidy benefits for inpatient services. Here too, richer groups gained more benefits from services provided at the regional and teaching hospital levels. At the district hospital level though, the two poorest quintiles together gained about 34% of the total share, and the two richest quintiles also gained about the same. The middle quintile gained the most from the public subsidy on district hospital inpatient care (see Figure 5.4). These are consistent with findings in other developing countries such as Indonesia, India and sub-Saharan Africa where the poor tend to rely on public hospitals rather than private hospitals, particularly at a district hospital level, for inpatient care (Lanjouw 2001; Pearson 2002; Gupta 2003; Mahal 2003; Tangcharoensathien, Limwattananon et al. 2007; Davoodi, Tiongson et al. 2010).

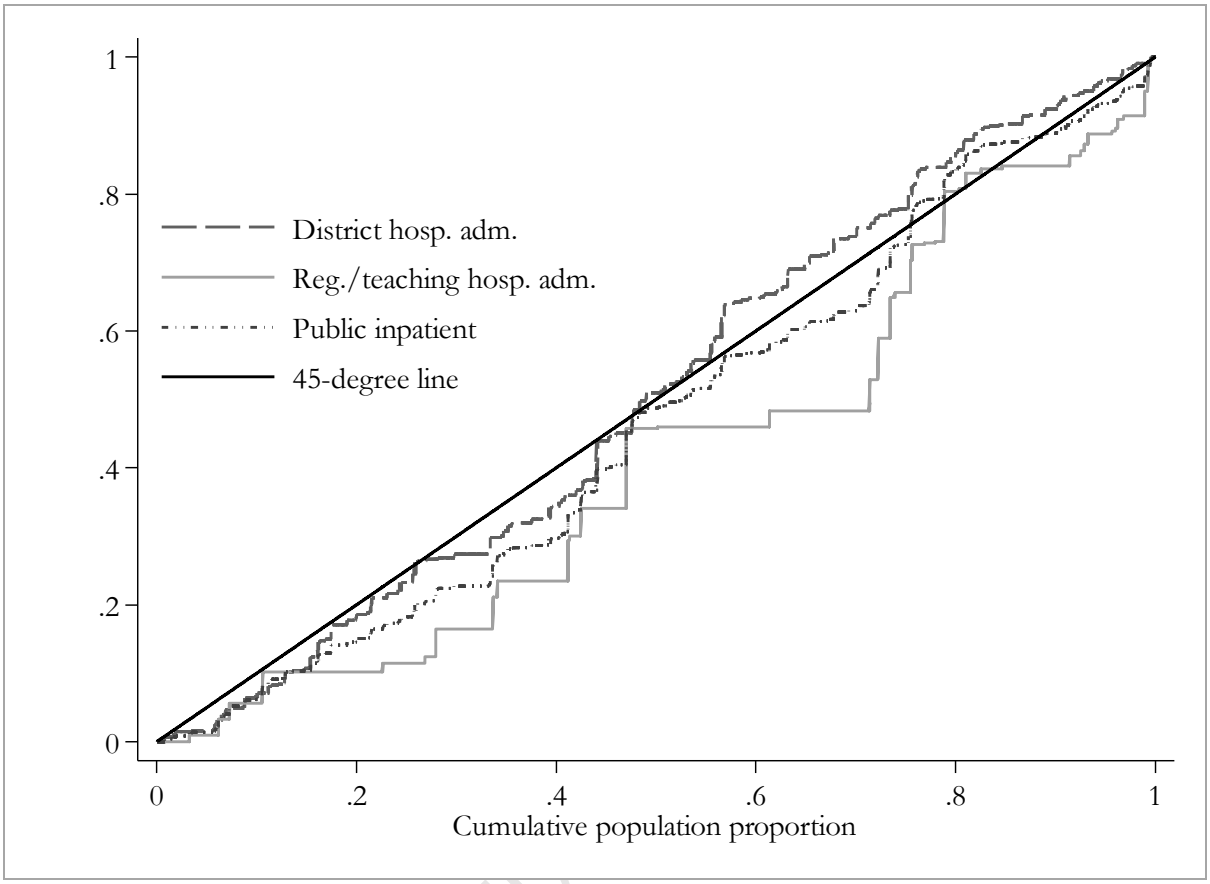
Figure 5. 4 Distribution of benefits from public subsidies on inpatient care



	District	Teaching/regional	Total public sector inpatients
Poorest	18.6	10.2	15.0
2nd poorest	15.7	13.2	14.7
Middle	30.4	22.5	27.1
2nd richest	20.6	34.5	26.5
Richest	14.7	19.6	16.8

The concentration curves and dominance test for public subsidies on inpatient care are presented below.

Figure 5. 5 Concentration curve showing public subsidies in inpatient services



The concentration curve for district hospital admissions crosses the line of equality and the concentration index has a negative value (-.0105915) indicating a pro-poor distribution of benefits of public subsidies on inpatient care at the district hospital level. Given the similar distribution of benefits among the poorest and richest quintiles in total inpatient care for district hospitals, dominance tests were carried out to rule out any uncertainty (O' Donnell 2008; Davoodi, Tiongson et al. 2010; McIntyre and Ataguba 2010). The dominance tests confirmed a pro-poor distribution of subsidies for inpatient care at the district level, but a pro-rich distribution of subsidies for inpatient care overall (see Table 5.6).

Table 5. 6 Concentration indices and dominance test for public subsidy on inpatient care

Inpatient care	Concentration index	Dominance test
Teaching/regional inpatient	.1729758	Non dominance
District hospital inpatient	-.0105915	Non dominance
Total subsidy public inpatient	.0673368	45° line dominates

The concentration index and dominance test for total public subsidy for both outpatient and inpatient services indicates a pro-rich distribution in general. Concentration indices and dominance test are shown in Table 5.7.

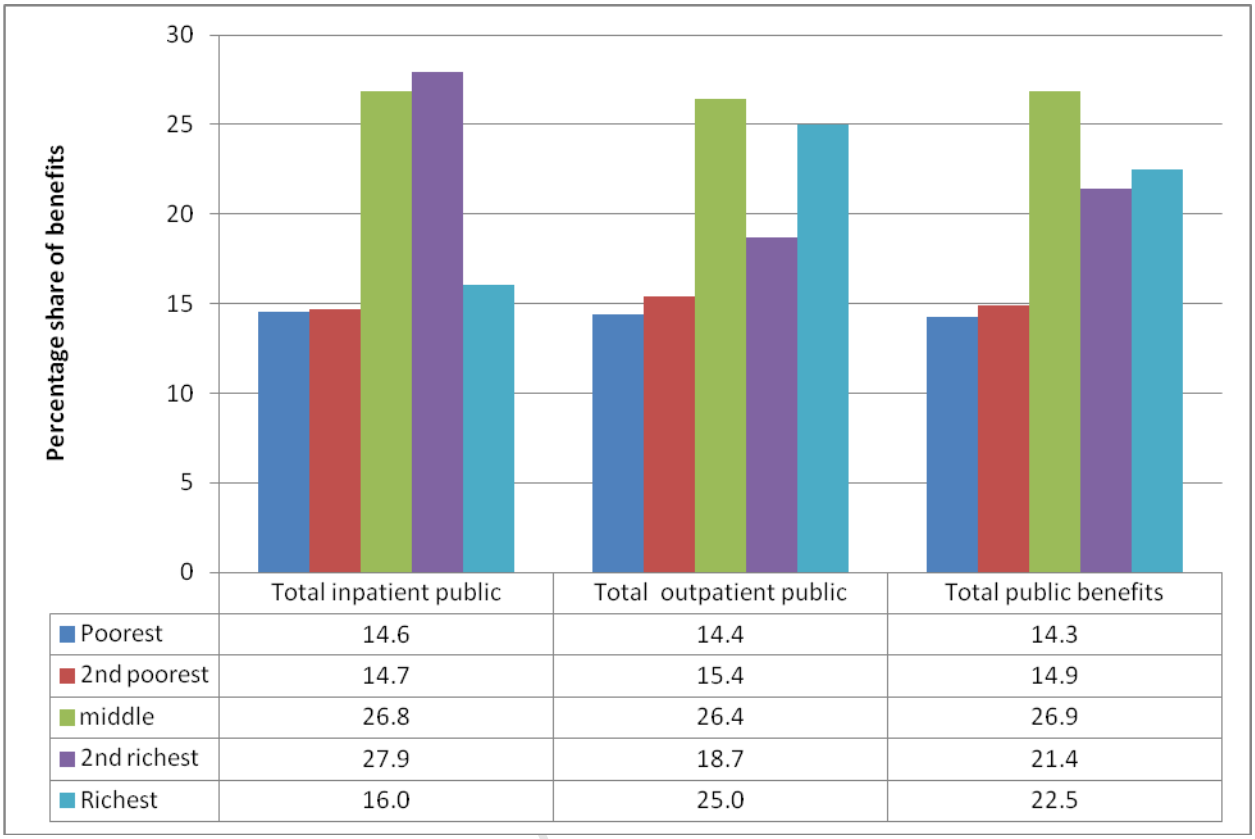
Table 5. 7 Concentration index and dominance test for public subsidy for all outpatient and inpatient services combined

Total subsidy	Concentration index	Dominance test
Total public subsidy	.1040563	45° line dominates

5.2.4 Total benefit of using public sector services

The next section looks at total benefits from using public sector health care services, i.e. unlike the previous sections, it does not focus purely on the public subsidy but on total spending on public services, irrespective of the funding source. There is a pro-rich distribution for both inpatient and outpatient care services. The middle quintile accrues most of the benefits followed by the two richest quintiles who gained more than 40% of benefits. The two poorest quintiles gained less than 30% (see Figure 5.6 below).

Figure 5. 6 Total benefits from using public sector services



	Total inpatient public	Total outpatient public	Total public benefits
Poorest	14.6	14.4	14.3
2nd poorest	14.7	15.4	14.9
middle	26.8	26.4	26.9
2nd richest	27.9	18.7	21.4
Richest	16.0	25.0	22.5

Concentration indices and dominance tests confirm a pro-rich distribution in the benefits from use of public sector services for outpatient and inpatient services.

Table 5. 8 Concentration indices and dominance tests for public subsidies for outpatient, inpatient and total benefits

Type of care	Concentration index	Dominance test
Total benefits public outpatient	.1216623	45° line dominates
Total benefits public inpatient	.0750738	45° line dominates
Total public benefits	.1085402	45° line dominates

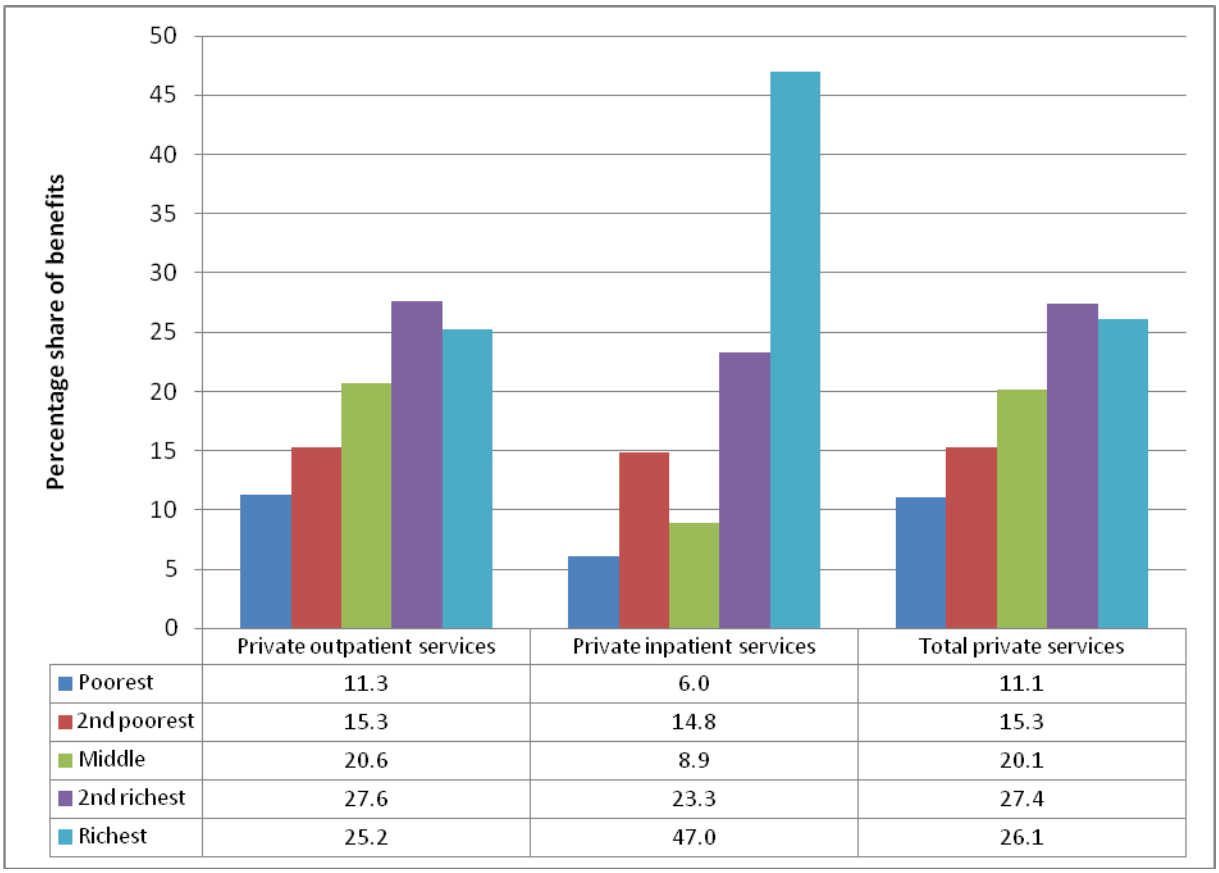
5.3 Benefit incidence from private sector health care services

This section presents the benefit incidence of private health care services among Ghanaians. Private health care services include private hospitals and clinics and maternity homes, private pharmacies and chemical sellers, traditional birth attendants, drug peddlers and self-treatment at home.

5.3.1 Distribution of private inpatient and outpatient health care benefits

Figure 5.7 below shows that both private outpatient and inpatient health care services mainly benefit the two richest quintiles. Benefits from private inpatient care are particularly skewed as the richest gained nine times more than the poorest gained. These findings are in line with many other studies which show the persistent benefits from private services by the rich for both outpatient and inpatient health care (Makinen, Waters et al. 2000; Lanjouw 2001; Mahal 2003; Gwatkin, Bhuiya et al. 2004)

Figure 5. 7 Distribution of private inpatient and outpatient health care benefits



	Private outpatient services	Private inpatient services	Total private services
Poorest	11.3	6.0	11.1
2nd poorest	15.3	14.8	15.3
Middle	20.6	8.9	20.1
2nd richest	27.6	23.3	27.4
Richest	25.2	47.0	26.1

Concentration indices were positive and dominance tests indicate the dominance of the 45° line confirming the pro-rich distribution of both inpatient and outpatient private health care (see Table 5.9).

Table 5. 9 Concentration indices of private outpatient and inpatient health care

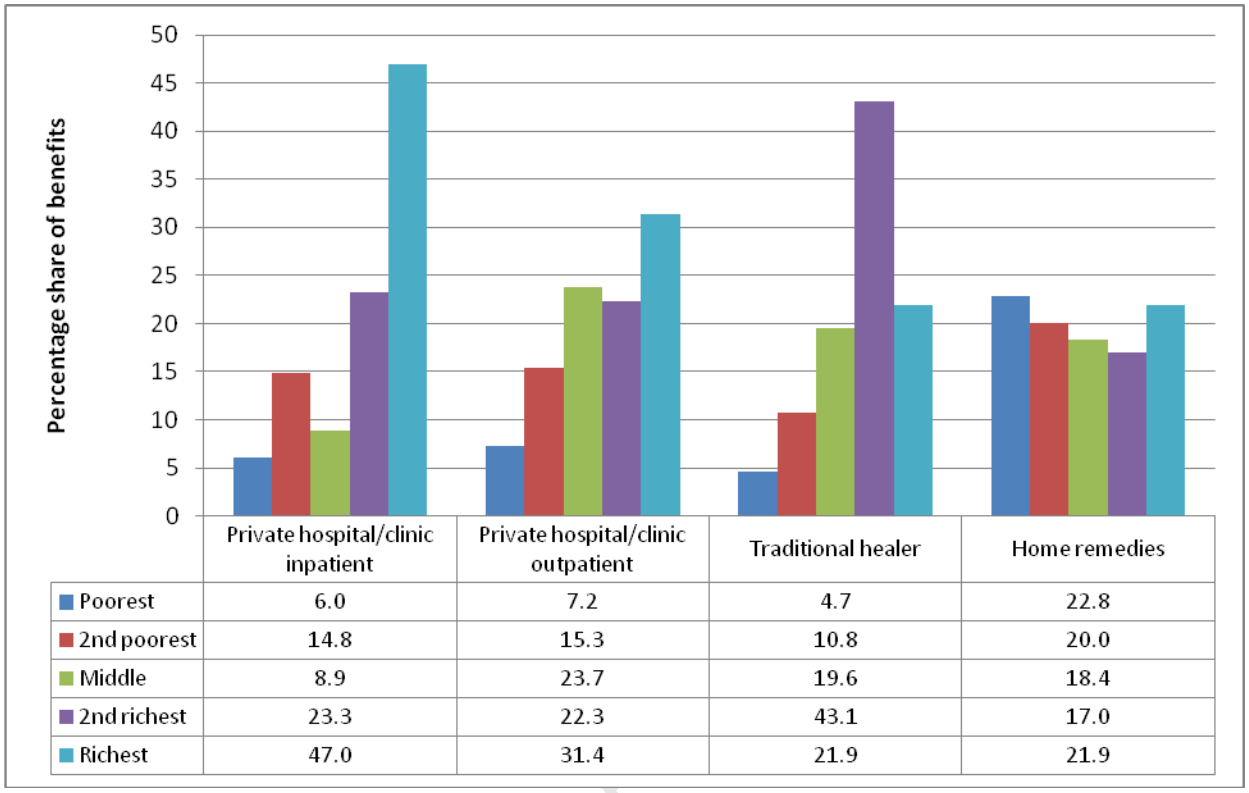
Type of care	Concentration index	Dominance test
Total benefit inpatient private	.418642	45° line dominates
Total benefit outpatient private	.1809458	45° line dominates
Total benefit private	.1910816	45° line dominates

5.3.2 Distribution of benefits by type of private provider

The analysis of the use of private care by type of provider indicates that visits to private clinics and hospitals are mainly by the richest. Treatment at home includes visits to chemical sellers, pharmacies and home remedies. These services were the only type of private service that is used more by the poor. The rich use traditional medicine considerably. While it is sometimes assumed that the poor use traditional medicines more than higher income groups, this is not the case in Ghana. This is because traditional medicine in Ghana is now a well-established industry with medicines being well packaged and marketed rather than simply sold by a herbalist or other healer. These products are not cheap and may be beyond the reach of the poor.

Figure 5.8 below presents the distribution of benefits by type of private service.

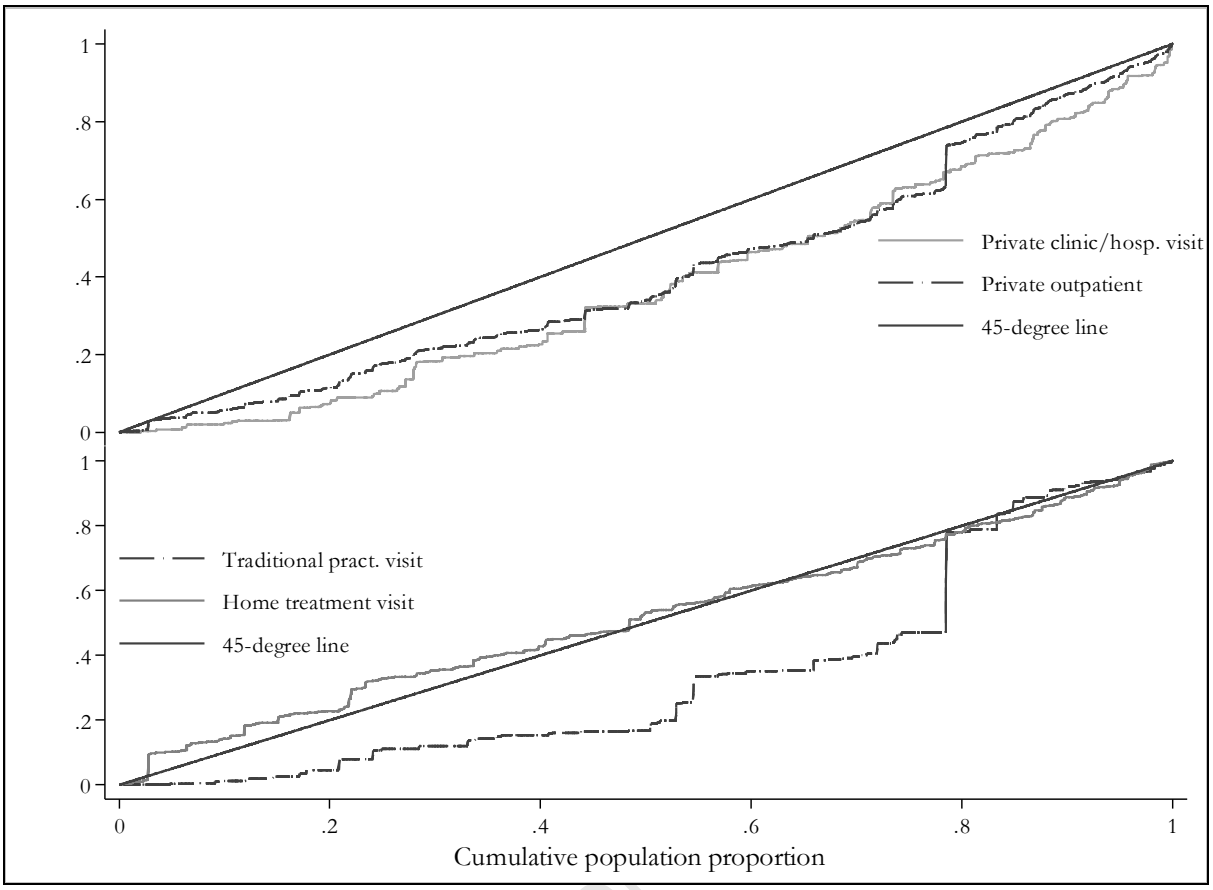
Figure 5.8 Distribution of benefits by type of private care



	Private hospital/clinic inpatient	Private hospital/clinic outpatient	Traditional healer	Home remedies
Poorest	6.0	7.2	4.7	22.8
2nd poorest	14.8	15.3	10.8	20.0
Middle	8.9	23.7	19.6	18.4
2nd richest	23.3	22.3	43.1	17.0
Richest	47.0	31.4	21.9	21.9

Concentration curves show a pro-poor distribution of home treatment (see Figure 5.9). All other private health care services are pro-rich.

Figure 5. 9 Concentration curves for different types of private outpatient care



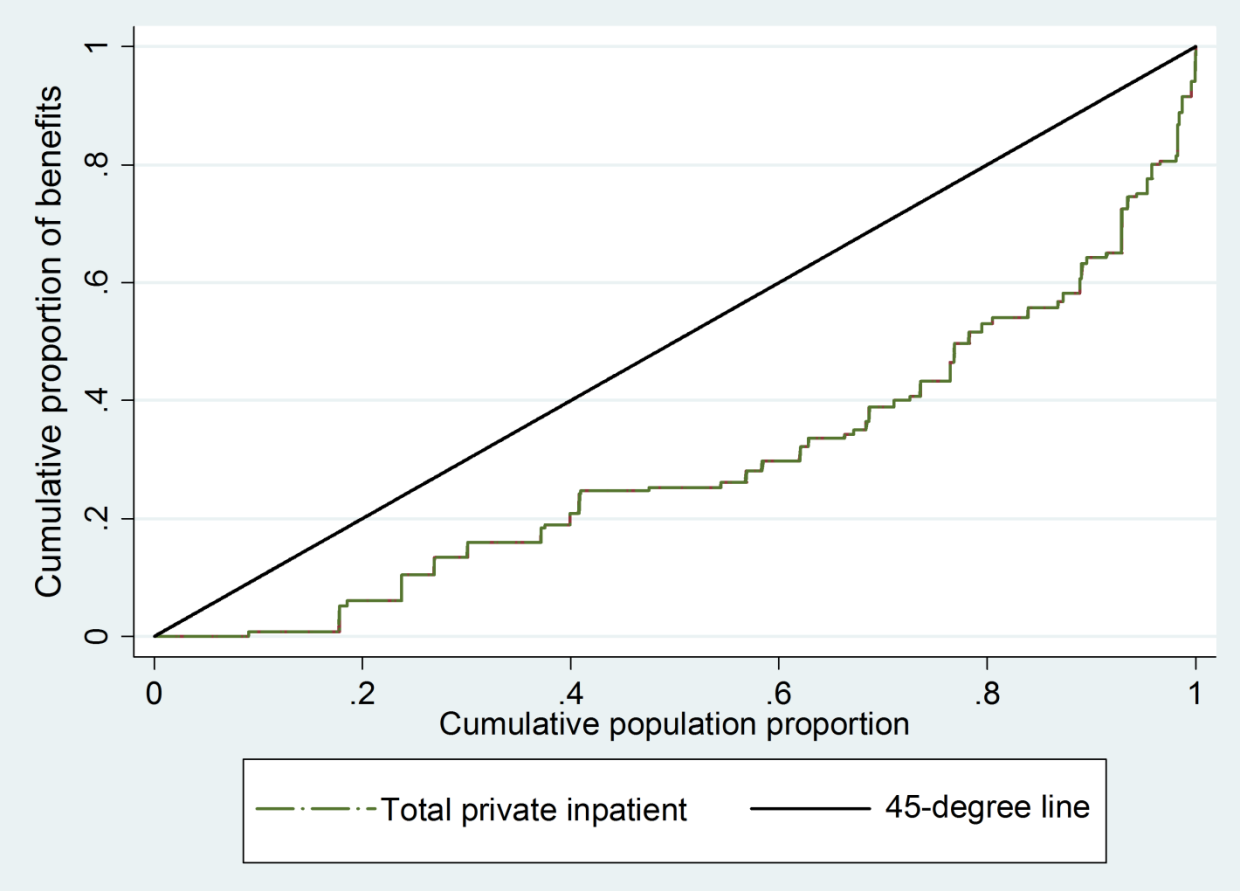
Dominance tests (see Table 5.10) for private health care confirm home treatment as mainly being used by the poor with a negative concentration index of -.0324053.

Table 5. 10 Concentration indices and dominance tests for various private outpatient care services

Type of care private health care	Concentration index	Dominance test
Private hospital /clinic inpatient	.418642	45° line dominates
Private hospital/ clinic outpatient	.2368785	45° line dominates
Traditional practice	.3239711	45° line dominates
Home treatment	-.0324053	Non-dominance

Private inpatient care in private hospitals and clinics is strongly pro-rich as indicated by the concentration curve below.

Figure 5. 10 Concentration curve for private inpatient care



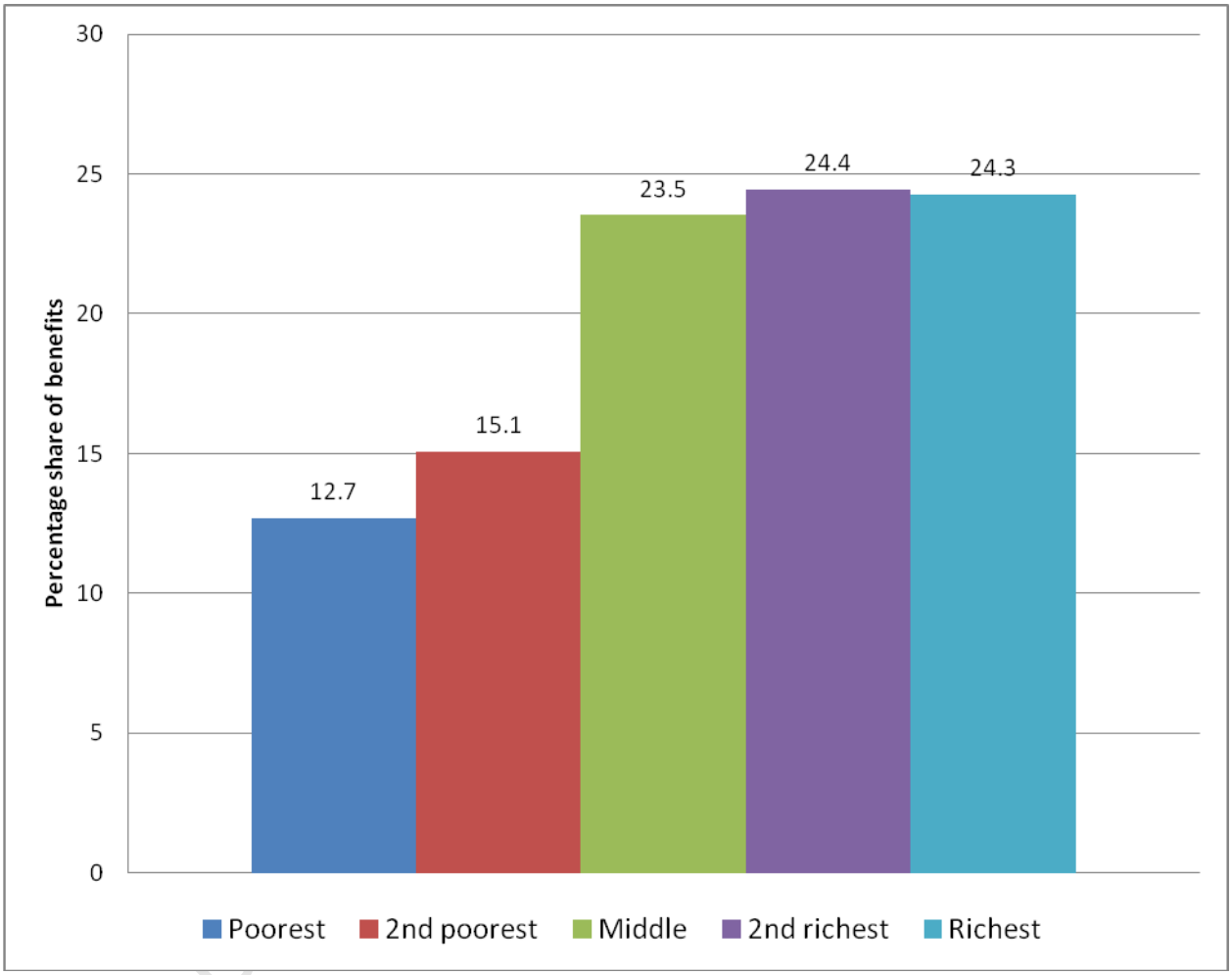
5.4 System-wide benefit incidence analysis

This next section presents findings for the overall health system, i.e. from both the public sector and the private sector. It takes into consideration benefits from all public sector facilities; teaching, regional and district hospital inpatient and outpatient health care services, all public health centres and clinics, in addition to health care benefits from private hospital and clinic inpatient and outpatient care, maternity homes visits, pharmacy and chemical shop visits, self-treatment and use of traditional healers. It includes the total benefits from these services irrespective of how they are funded.

Distribution of total benefits in the system-wide BIA is again pro-rich. The richest quintile gained almost double (24%) that of what the poorest quintile gained (12.7%). On the whole, the two richest quintiles accumulated almost half of total health care benefits, whilst the two poorest quintiles gained less than 30% of total public and private health care benefits (see Figure 5.11

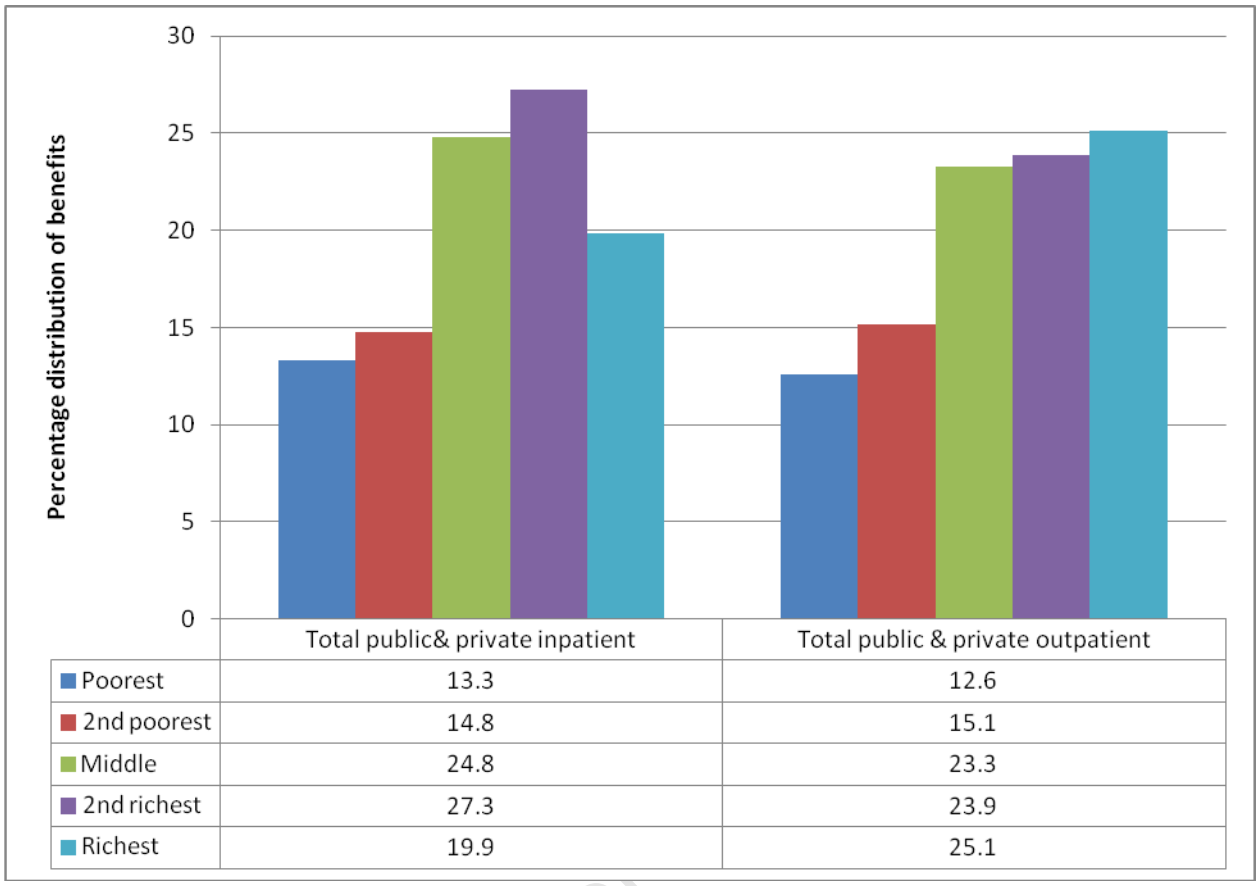
below). Benefits to the poor are even smaller in the system-wide BIA analysis as compared to the benefits purely from public subsidies.

Figure 5. 11 Total benefits from health service use by socio-economic status



A review of total benefits from inpatient and outpatient services in the system-wide BIA shows that the poorest benefit the least from both types of services (see Figure 5.12 below).

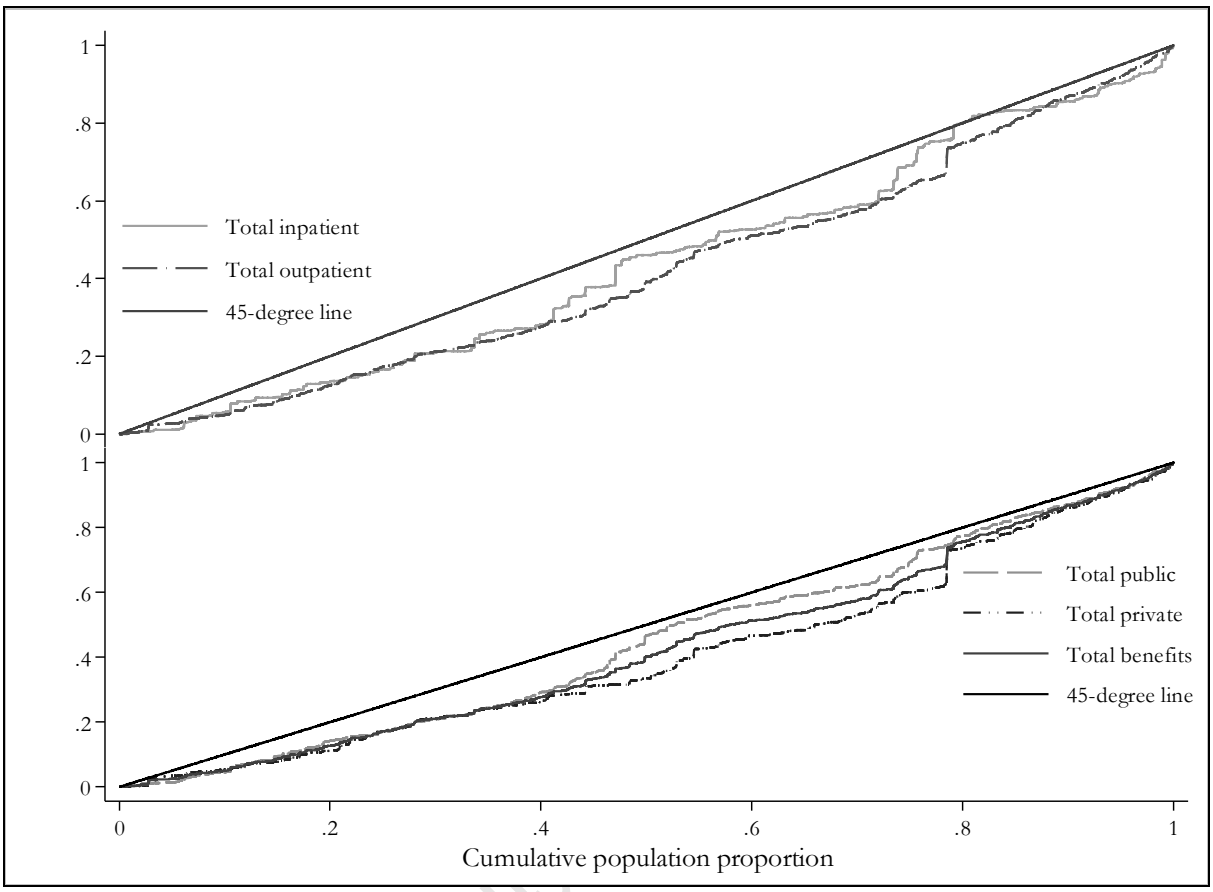
Figure 5. 12 Distribution of total public and private inpatient and outpatient service benefits



	Total public& private inpatient	Total public & private outpatient
Poorest	13.3	12.6
2nd poorest	14.8	15.1
Middle	24.8	23.3
2nd richest	27.3	23.9
Richest	19.9	25.1

The 45 degree line dominates the concentration curves for all of the categories of services (see Figure 5.13).

Figure 5. 13 Concentration curves for total public and private health care benefits



In conclusion, benefits from the use of both public and private health care and for both inpatient and outpatient care are pro-rich. There is no statistically significant difference between the 'traditional' and 'system wide' BIA results. These findings clearly show that five years after the introduction of the NHIS, the poor are still lagging behind in benefiting from publicly provided health care services as well as privately provided services. Table 5.11 summarises the findings.

Table 5. 11 Concentration indices and dominance tests by type of care

Type of care	Concentration index	Dominance test
Total private	.1910816	45° line dominates
Total public	.1084968	45° line dominates
Total outpatient	.1556944	45° line dominates
Total inpatient	.1206267	45° line dominates
Overall total public and private	.1500329	45° line dominates

5.5 Sensitivity Analysis

In calculating unit costs of publicly provided services, I used the South African ratios to allocate hospital costs between inpatient and outpatient services with different ratios at different levels of care (Ataguba forthcoming). The South African study, found that the cost of an outpatient visit to a district hospital was equivalent to 0.37 of the cost of an inpatient day and 0.42 in regional hospitals, whilst in provincial or central hospitals it was 0.56. This shows that the use of a single ratio for all hospital levels is inadequate. The inadequacy of using the same ratios for different hospitals was also found by Lombard (1991) in his modelling of net expenditure of hospitals in the Cape Province in South Africa. He concluded that using a 0.33 ratio as the proportion of costs for outpatient visits to inpatient care for all hospital levels is inadequate.

Ghana has currently not estimated ratios to calculate the cost of inpatient and outpatient care at different hospital levels and therefore I used those from South Africa due to the robust nature of the recent South African estimates (Ataguba). However to check on the sensitivity of my findings to changes in this assumption, I also used the ratio often used by other analysts. In this case, an outpatient visit was estimated as a third of an inpatient day (Xu, Evans et al. 2006). With these ratios, the unit cost estimates were as summarized in Table 5.12.

Table 5. 12 Unit costs of public sector services using the frequently used ratio of 1:3 (Ghana Cedis)

Facility type	Total Unit costs				Public Subsidy Unit costs			
	IPD	OPV	ALOS	Cost per admission	IPD	OPV	ALOS	Cost per admission
Teaching Hospital	84.09	27.75	9	756.82	47.38	15.63	9	426.40
Regional Hospital	53.18	17.55	4.06	215.93	44.38	14.65	4.06	180.19
District Hospital	47.28	15.60	4.05	191.49	38.73	12.78	4.05	156.85
Health centres/clinics	-	3.00	-	-	-	2.59	-	-

Using these unit costs did not change the overall distribution of benefits in either the public subsidy or system-wide benefit incidence analyses. Concentration indices remained largely the

same. The table below shows some concentration indices using the South African ratio and compared with concentration indices obtained using the 0.33 ratio used by some other analysts.

Table 5. 13 Concentration indices using South African ratios and single ratio frequently used by other analysts (using the public subsidy BIA)

Ratios	District Hospital inpatient care	Regional &Teaching Hospital inpatient care	All inpatient	All outpatient	All outpatients and inpatients
Frequently used single ratio	-0.0105214	0.1697167	0.0706146	0.1131768	0.1002679
South African ratios	-0.0105915	0.1729758	0.0673368	0.1172144	0.1040563

5.6 Distribution of benefits by insurance status

To assess the difference in use of services for those who are insured compared with those who are not insured, I looked at benefits to those with insurance cover and those without insurance cover. Although I cannot explore a direct causal relationship between insurance status and use, it is important to assess differences in use and benefits between the two groups.

From the analysis, the average benefits in Ghana Cedis by the insured are higher than for the uninsured. It is evident that the insured gain considerably more benefits than the uninsured, particularly from public sector services (see Table 5.14).

Table 5. 14: Average benefits per person in Ghana Cedis by insurance status

Type of service	Average benefit in Ghana Cedis		
Public sector service	**Total benefits**	OPD	INP
Insured	23.12	6.05	17.07
Uninsured	5.88	1.58	4.30
Private sector service		OPD	INP
Insured	17.39	0.70	16.19
Uninsured	15.96	0.41	15.55

As benefits are influenced by both utilization and unit costs, I analysed the distribution of service utilization to better understand the benefit incidence findings (see Table 5.15)

Utilization rates for public and private outpatient visits and admissions of insured clients are about three times that of the uninsured. For visits to informal providers, utilization rates are the same for both the insured and uninsured (See Table 5.15 below). This highlights major disparities in use of health services between the insured and uninsured.

Table 5. 15 Utilization rates of outpatient visits and hospital admissions in the public and private sectors by insurance status (outpatient visits and admissions per person per year)

OPD	**Insured**	**Uninsured**	**Ratio**
Public clinics	1.294071	0.382902	3:1
District Hospitals	0.730384	0.212508	3:1
Regional/Teaching	0.080016	0.022607	4:1
Private clinics/hospital	0.422227	0.2057536	2:1
Total formal OPD	**2.526698**	**0.8237706**	**3:1**
Traditional	0.2465706	0.4345522	1:2
Home treatment	1.659495	2.0111	1:1
Total informal	**1.9060656**	**2.4456522**	**1:1**
Admissions	**Insured**	**Uninsured**	
District	0.0205088	0.0080258	3:1
Regional/teaching	0.0045441	0.0014253	3:1
Private	0.0036064	0.0010689	3:1
Total admissions	**0.0286593**	**0.01052**	**3:1**

Table 5.16 shows the distribution of the population with insurance cover and those without across socio-economic groups. It shows that among the poorest quintile, only 26% are insured whilst 44% of the richest quintile is insured. This effectively means that those benefiting from the new financing mechanism are more concentrated among the richest group than the poorest.

Table 5. 16 Insurance status within socio-economic groups

Quintile	**Insured %**	**Uninsured %**
Q1	26	74
Q2	36	64

Q3	39	61
Q4	41	59
Q5	44	56

5.7 Comparison of health care benefits and need

Previous studies have only looked at the distribution of health service benefits in relation to the percentage share of benefits for each population group. In particular, each socio-economic quintile (20%) is assessed to see if it gains 20% of benefits. The implicit assumption is that if a particular quintile secures 20% of the benefits from using health care services, it is receiving its "fair share". This study defines equity in health service use as populations receiving benefits in relation to their health needs. It therefore goes beyond looking only at benefits in relation to each quintile's share and rather looks at benefits in relation to the health needs of the different socio-economic groups, as pointed out in Chapter Three.

The next section examines the distribution of ill-health in Ghana.

5.7.1 Comparison of the distribution of health care needs across socio-economic quintiles

Table 5.17 below is extracted from the 2003 and 2008 Ghana Demographic and Health Surveys (DHS). It indicates that the burden of ill-health is undoubtedly higher among the poor than the rich. For example, under-five mortality rates are highest among the poorest quintiles, being 128 for quintile 1 but 88 in quintile 5 in 2003. The 2008 DHS data show the same pattern. Table 5.17 also shows that the key health problems in the country such as malaria, acute respiratory infections, malnutrition and diarrhoeal diseases are concentrated among the poor.

Table 5. 17 : Some key statistics showing morbidity and mortality by quintiles using Ghana's (DHS) 2003 & 2008

DHS 2003 health indicators	Q1	Q2	Q3	Q4	Q5
Under five mortality rates per 100,000 live births	128	105	111	108	88
Percentage of children classified as malnourished	16.5(799)	12.3(716)	10.1(655)	6.9(541)	4.5(471)
Percentage of children with diarrhoea in the past 2 weeks preceding the survey	19.7(864)	14.2(740)	13.9(656)	15.2(572)	10.9(507)
Percentage of women 15-49 years with anaemia	53.7(899)	45.6(893)	47.3(1012)	40.7(1153)	39.6(1316)
DHS 2008 health indicators	**Q1**	**Q2**	**Q3**	**Q4**	**Q5**
Under five mortality rates per 100,000 live births	103	79	102	68	60
Percentage of child U5 classified as malnourished	13.9(623)	12.4(573)	8.8(468)	6.0(504)	5.3(356)
Incidence of diarrhoea in child U5	25.3(693)	21.4(610)	21.5(507)	16.4(528)	10.2(393)
Children with fever in the past 2 weeks preceding survey	19.7(693	22.3(610)	22.0(507)	19.6(528)	14.3(393)
Percentage of children with symptoms of ARI	6.2(693)	5.5(610)	4.6(507)	7.4(528)	2.9(393

Given that need for health care is not evenly distributed across socio-economic groups, it is important to compare the distribution of health care benefits and the distribution of need for health care across population groups in Ghana. It must be mentioned, however, that there are limitations to such comparisons and that it does not necessarily mean that if, for example, 30% of the health burden falls on the poorest, then they must gain 30% of benefits. It is not a one-to-one relationship. Nevertheless, as there is substantial evidence that invariably the poor tend to suffer higher rates of morbidity and mortality than their richer counterparts (Lanjouw 2001; Gupta 2003; Freedman, Waldman et al. 2005; Ashford, Gwatkin et al. 2006; O' Donnell 2008; Peters, Gard et al. 2008), it is important that they benefit from health care services relatively more.

My study measured health care needs using self-assessed health status. This is a method frequently used to measure health needs in studies internationally (Mamot 1991; Idler 1997; Miilunpalo 1997; Kennedy 1998; Shi 2000). Although self-assessed health status is a relatively

crude measure, it encompasses all the dimensions of health. It is also important that the health need measure is linked with socio-economic status. This can generally only be done through household surveys and self-assessed health status is well suited to such surveys. In my survey, respondents were asked to assess their health status on a four point scale, "*'very good', 'good', 'average' or 'poor'.* The responses '*very good' and 'good'* were rated as good health and '*average' and 'poor'* were rated as poor health.

The table below shows estimates of self-assessed health status by quintiles. It shows that more of the poorest quintile (Q1) rate themselves as having poor or average health (15%) than the richest quintile (10%). These are comparable with results in Table 5.17 in that the burden of ill-health is higher among the poor than the rich.

Table 5. 18 Self- assessed health status by quintiles

Quintiles	Very good	Good	Average	Poor
Quintile 1	50.33%	34.79%	11.34%	3.54%
Quintile 2	47.34%	39.68%	11.97%	1.01%
Quintile 3	57.36%	31.49%	8.83%	2.31%
Quintile 4	54.97%	32.46%	10.18%	2.40%
Quintile 5	63.19%	26.89%	7.44%	2.48%

The next section presents the comparisons of health service benefit distributions with the distribution of need. As both the utilization of health services (which forms the basis of benefit estimates) and self-assessed health status were measured through the same household survey they are directly comparable. Therefore this study provides the opportunity to link health care need to the socio-economic status of the population, and to the benefits from health service use of each socio-economic group.

It must however be noted that the concept of illness varies across communities Different social groups may assess their health differently such that what a rich person perceives as illness may be perceived otherwise by a poor person. However, the literature clearly indicates that these differences are found when one asks about 'self-reported illness', and for this reason it is regarded as a poor measure of need (Sauerborn, Nougtara et al. 1996; Makinen, Waters et al.

2000). Instead, most household surveys now use 'self-assessed health status' as an indicator of need for health care as it has been shown to have a statistically significant correlation with clinically determined presence or absence of disease.

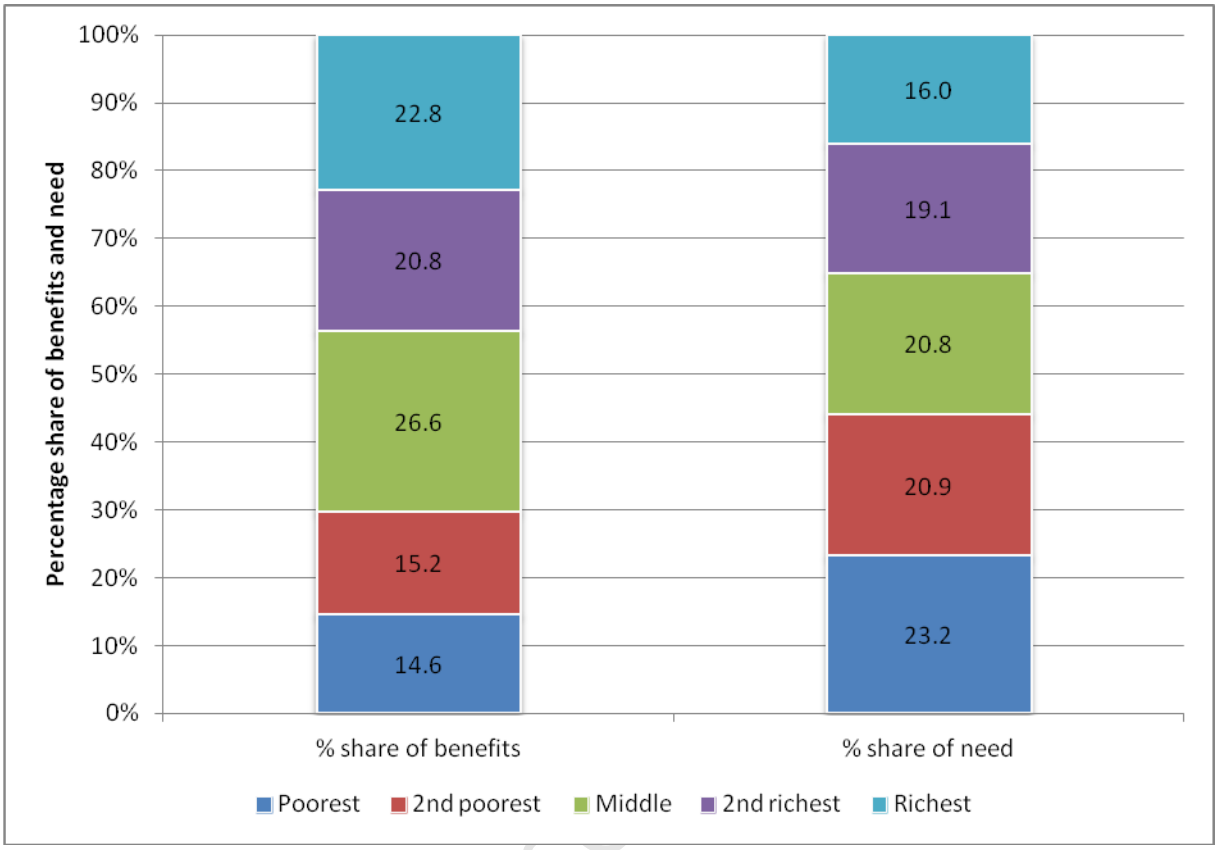
The next section presents results of overall public subsidy benefits in relation to the health needs of population groups.

5.7.2 Comparison of the benefits from the public subsidy with need

Though the poorest two quintiles disproportionately rated themselves as having a relatively greater need of health care (i.e. as being in poorer health), than the richer groups, their benefits from public subsidies are much less than their richer counterparts. The poorest quintile gained 14.6% of the public subsidy benefits but have 23.2% share of health care need. The richest quintile accrues almost 23% of public subsidy benefits but only account for 16% of health care need.

Figure 5.14 below shows the percentage share of public subsidy benefits and health needs across socio-economic quintiles.

Figure 5. 14 Percentage distribution of benefits from public health care subsidies relative to need



The results indicate that different socio-economic groups are not benefiting according to their needs (with the possible exception of quintile 4), indicating inequity in the distribution of the benefits of public health care subsidies

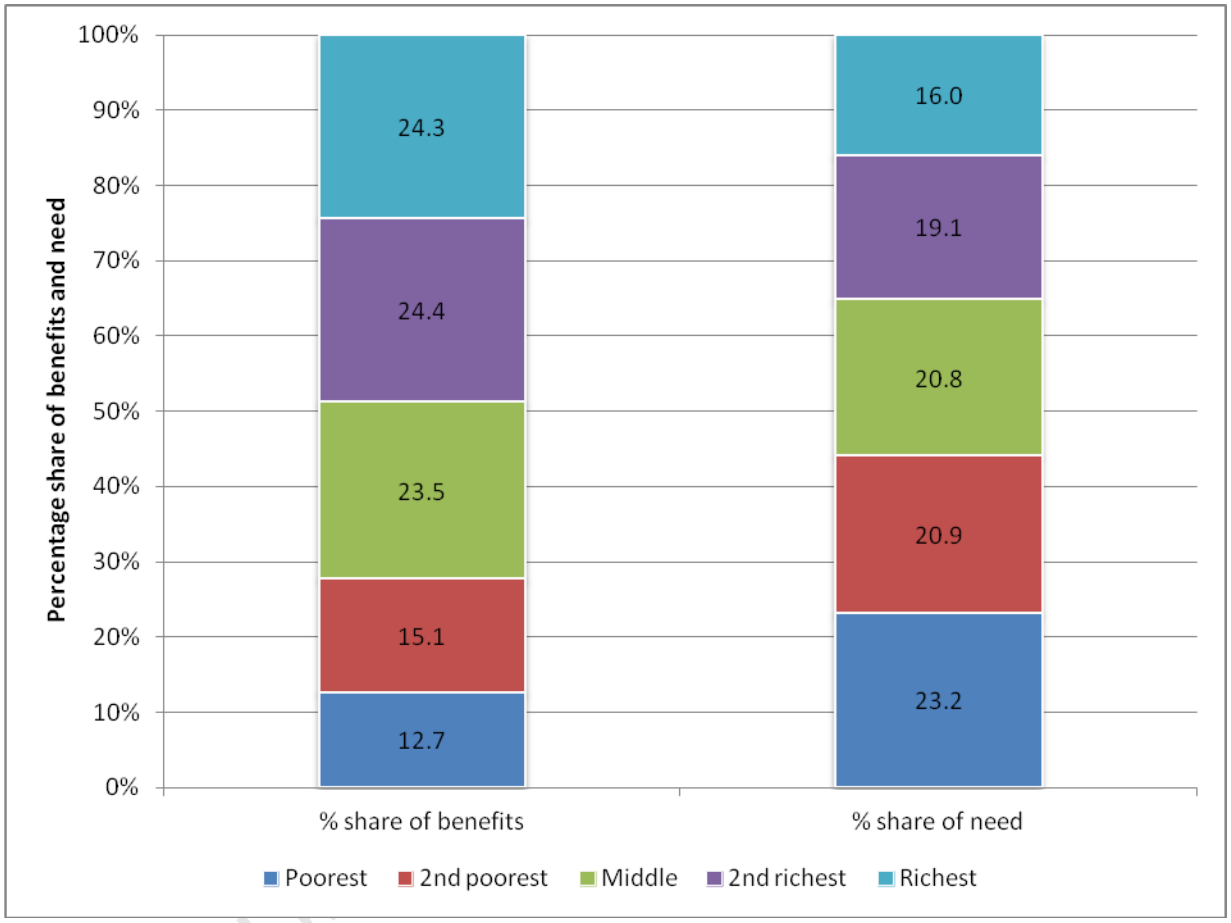
These findings present only part of the picture. Comparing the health care benefits from the use of services in the entire system with the distribution of health need provides a more complete picture as the private sector provides a significant proportion of health care in Ghana. In some cases private providers are more geographically accessible and their contribution to health care provision cannot be ignored. In addition, the NHIS purchases services from both public and private providers. The next section compares benefits from the use of all types of health services in Ghana (both public and private services) with need across socio-economic groups.

5.7.3 Comparison of the system-wide benefits with need

Figure 5.15 illustrates the distribution of total benefits from using health care services relative to health care need for each socio-economic group. It confirms that the poorest indeed receive far

fewer benefits relative to their need for health care within the overall health care system. The poorest quintile gained only 12.7% of health care benefits relative to their need of 23% of health, whilst the richest gained 24.3% benefits though their need was only 16%.

Figure 5. 15 Percentage distribution of health care benefits and need



5.8 Maternal health services

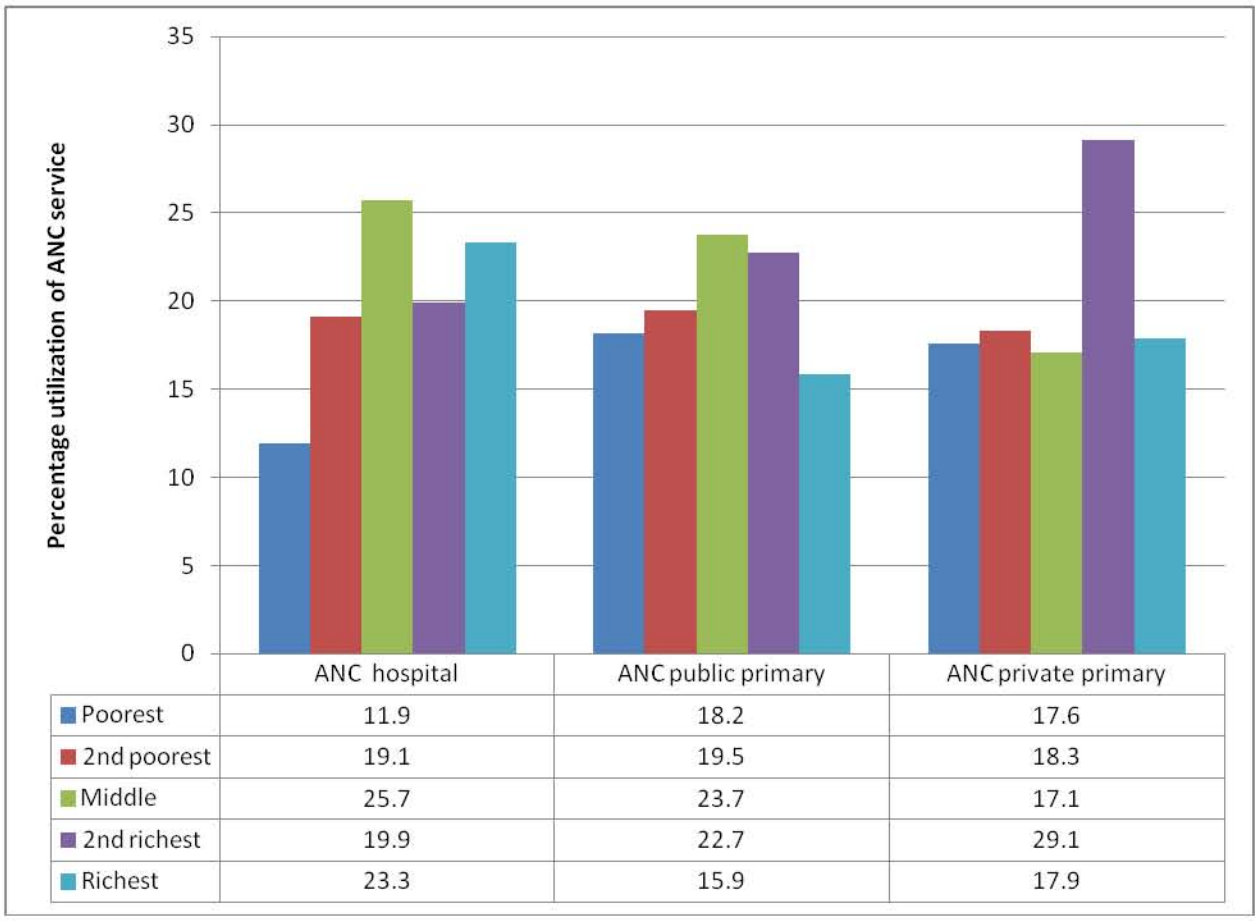
The study also looked at the utilization incidence of certain maternal health care services. As this analysis focuses on individual services it was unnecessary to calculate the cost of those services in order to undertake a benefit incidence analysis. The main objective here is to assess who uses key maternal services (ANC and institutional delivery) among the various socio-economic groups.

Several documents indicate that preventive measures are essential to avoid maternal morbidity and mortality. Some of these prevention activities are for pregnant women to attend ANC services, for skilled attendants to be present during delivery and for post-natal care to be received as these services can lead to better health outcomes (Sahn 2002; DFID 2004; United Nations 2007; MOH. 2008; Mensah 2009; WHO 2009).

5.8.1 Utilization incidence for ANC services by type of facility

Utilization of ANC services is pro-rich in all types of facilities but more so at the hospital level. At the hospital level, the richest quintile accounts for more than 23% of utilization, whilst the poorest quintile accounts for about half (11.9%) of what the richest gain from service use. At the primary health care level, at both public and private facilities, the two poorest quintiles used services less than other quintiles (see Figure 5.16).

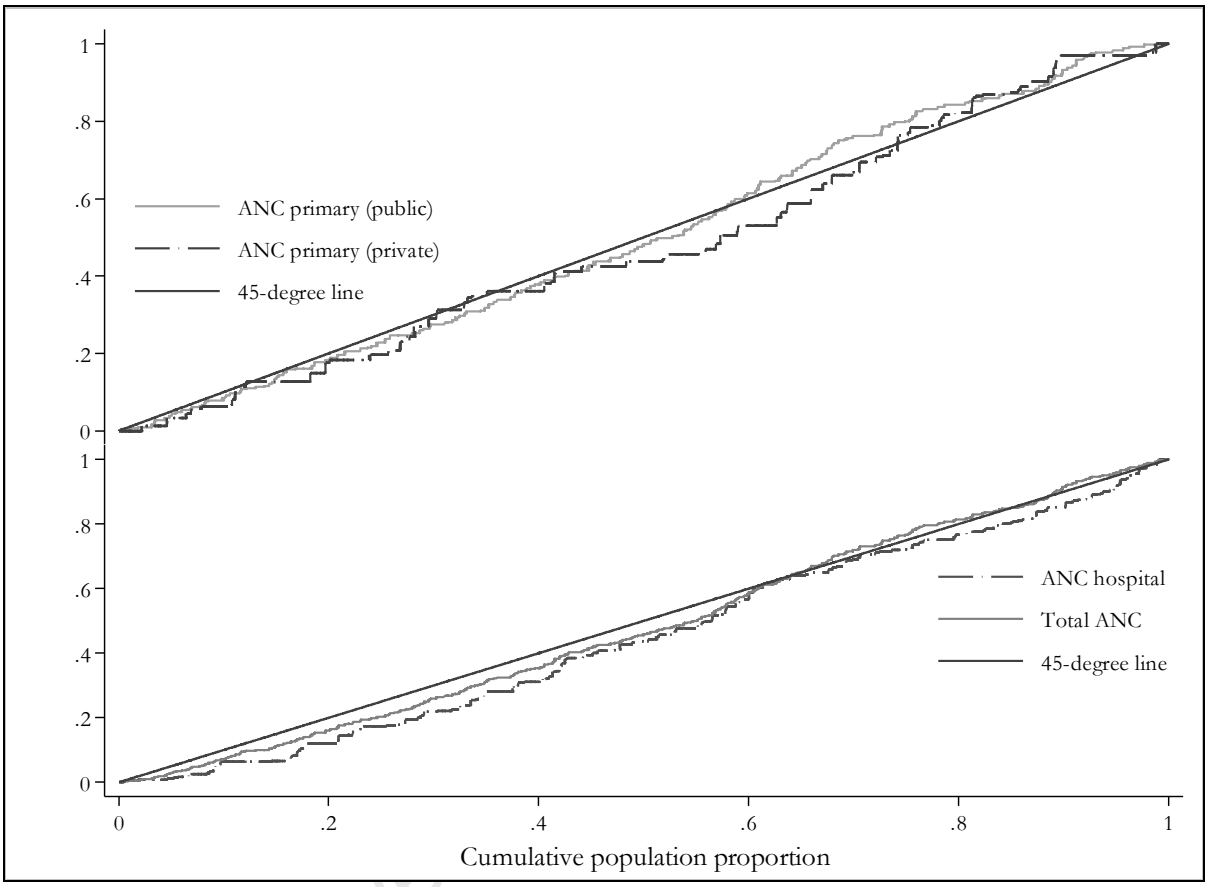
Figure 5. 16 Utilization incidence for ANC services by type of care



	ANC hospital	ANC public primary	ANC private primary
Poorest	11.9	18.2	17.6
2nd poorest	19.1	19.5	18.3
Middle	25.7	23.7	17.1
2nd richest	19.9	22.7	29.1
Richest	23.3	15.9	17.9

Concentration curves for the utilization incidence of ANC services are shown in Figure 5.17 below.

Figure 5. 17 Concentration curves for ANC by type of care



Concentration indices and dominance tests indicate a pro-rich distribution of ANC services at the primary care level for private sector services and at the hospital level. These measures indicate that the rich receive more of their ANC services at the hospital level. Public primary level ANC is pro-poor. The dominance tests show that the concentration curve for ANC services dominates the 45 °line for services in both public and private primary care (see Table 5.19).

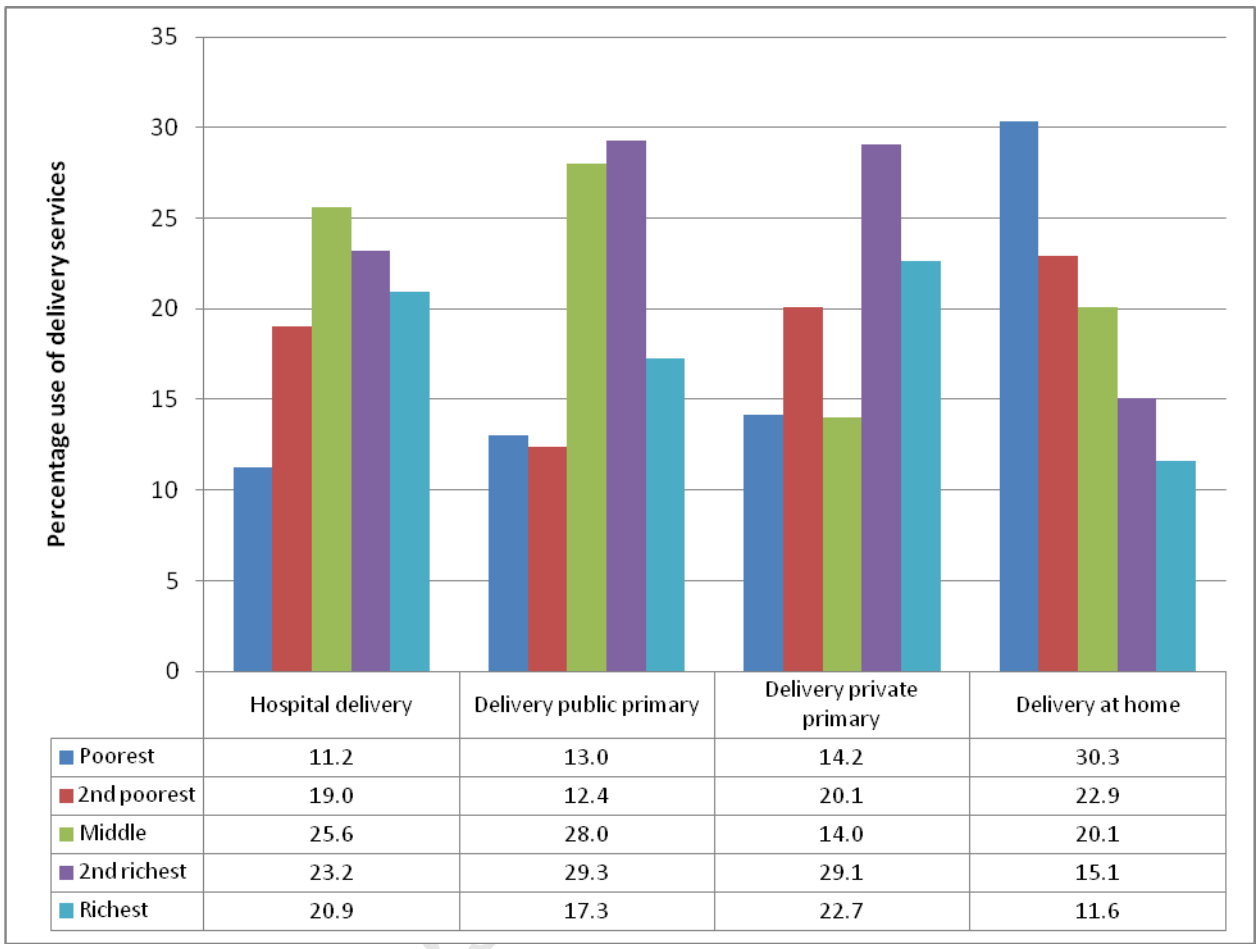
Table 5. 19 Concentration index and dominance tests for ANC services

Type of facility	Concentration index	Dominance test
ANC hospital	.0942833	45 °line dominates
ANC public primary	-.0067791	Concentration curve dominates
ANC private primary	.0394013	Concentration curve dominates
ANC Total	.0356367	Non-dominance

5.8.2 Delivery by type of facility

Delivery by type of facility follows the same pattern with the richest quintiles using more hospital care in both the public and private sectors. At the primary care level, the two richest quintiles use more of the services in the private sector. The poorest quintiles consistently use less formal health care services. The only service utilized more by the poorest quintiles is delivery at home. The poorest quintile's (Q1) use was more than 30% for home delivery (see Figure 5.18 below).

Figure 5. 18 Use of delivery services by type of care



	Hospital delivery	Delivery public primary	Delivery private primary	Delivery at home
Poorest	11.2	13.0	14.2	30.3
2nd poorest	19.0	12.4	20.1	22.9
Middle	25.6	28.0	14.0	20.1
2nd richest	23.2	29.3	29.1	15.1
Richest	20.9	17.3	22.7	11.6

Concentration curves for delivery show that the poor are much more likely to deliver at home. This result is similar to the Ghana DHS 2008 report where 76% of the poorest deliver at home as compared to less than 7% of their richer counterparts. Concentration indices and dominance tests verify these findings (see Table 5.20).

Figure 5. 19 Concentration curves for delivery by type of facility

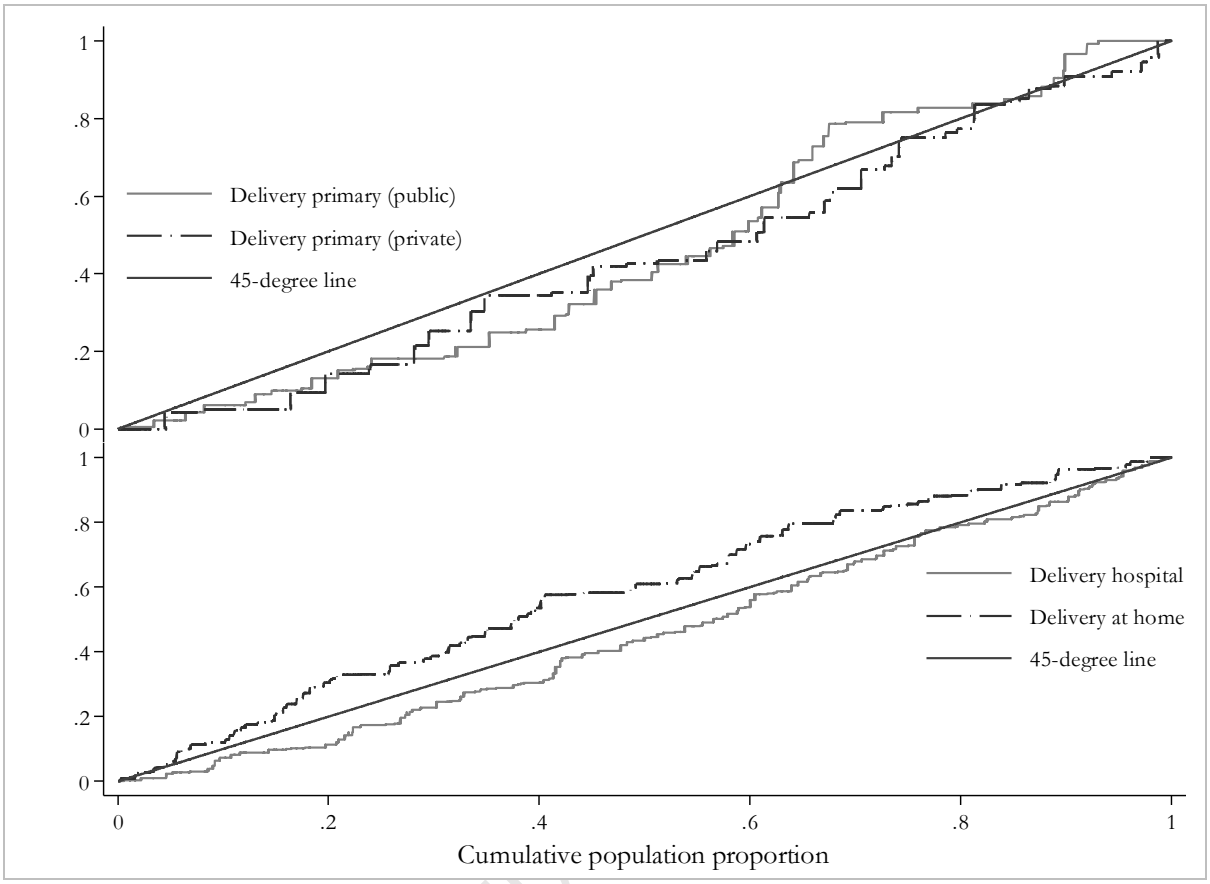


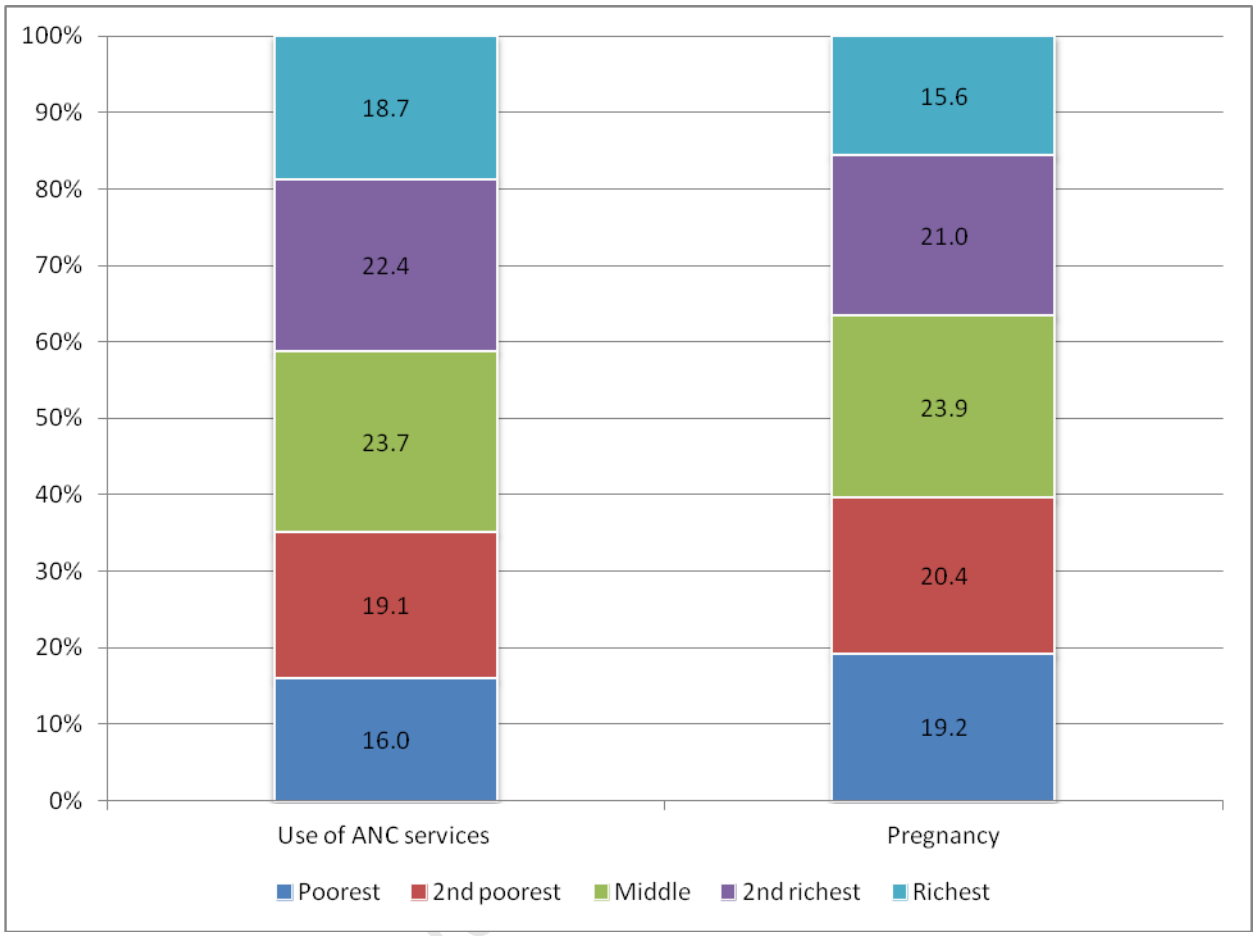
Table 5. 20 Concentration index and dominance tests for delivery services

Type of facility	Concentration index	Dominance test
Delivery hospital	.0873141	Non-dominance
Delivery public primary	.0725537	Concentration curve dominates
Delivery private primary	.1073861	Non-dominance
Delivery at home	-.1731561	Concentration curve dominates

5.8.3 Comparison of use of ANC services with pregnancy

A comparison of the distribution of the use of ANC services with the distribution of pregnancy, which is used as a proxy for the need for ANC services, across socio-economic groups shows that though ANC use is almost universal in Ghana, the poor are still left behind in relation to ANC.

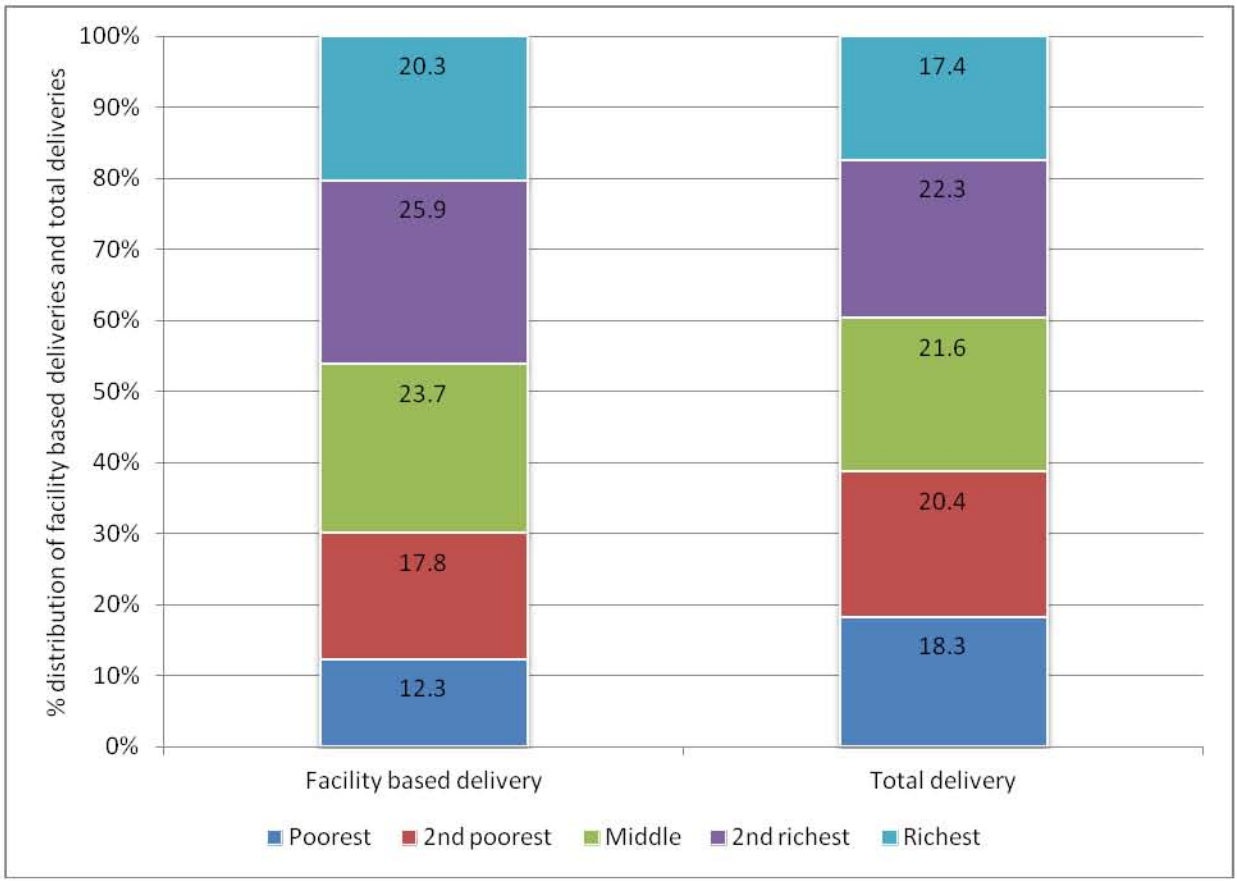
Figure 5.20 Comparison of use of ANC services and pregnancy



5.8.4 Comparison of facility based deliveries and total deliveries by socio-economic groups

To measure the need for delivery services in different socio-economic groups, all women who had recently delivered were considered. The results show clearly that women in the poorest two quintiles had the least deliveries in a health facility compared to the other three groups. Their utilization was also lower than their relative need for institutional deliveries. For example though the poorest 20% of women accounted for 18% of all deliveries, only 12% of these delivered in a health facility (see Figure 5.21).

Figure 5.21 Comparison of facility based delivery and total delivery across socio-economic groups



5.9 Summary

Overall, within the public sector the rich benefit more than the poor from using outpatient services at all levels of care. Though outpatient care is more evenly distributed at the primary care level, benefits are still pro-rich.

The rich gain more than the poor when it comes to public inpatient care at regional and teaching hospitals. The district level is the only level of public inpatient care with a pro-poor distribution. On the whole, the middle-income group gained the most at all levels of care in the public sector in Ghana. These results are similar to other low-and middle-income countries.

There was little change in the distribution of public sector benefits when OOP payments in public facilities are deducted from unit costs and the public subsidy is used in the estimation of benefits.

The richest gain most of the private sector inpatient and outpatient health care benefits. Private sector inpatient care is highly pro-rich with the richest quintile gaining more than 45% of all inpatient benefits whilst the poorest gained just about 5%.

Results from the system-wide BIA, which includes both public and private health sector spending on health, showed that the poor gained even less as compared to the 'traditional' (or public subsidy) BIA. Benefits to the poorest quintile decreased from 15% in the 'traditional' BIA analysis to about 13% for the system-wide BIA. Concentration curves for both outpatient and inpatient care in the system-wide BIA lie below the 45 degree line with positive concentration indices.

Primary care facilities are closer to communities and that may explain the relatively more even distribution at those levels than higher levels. Many poor people rely on publicly provided inpatient care at the district level. Here too, district hospitals are closer to communities than regional and teaching hospitals, which are often situated in urban areas in Ghana.

In Ghana, as is the case in other countries such as Vietnam, the main cause of the inequity in benefit incidence is to be found in the very high allocation of the public subsidy to hospital-based care, to which the poor are less likely to have access. So while the poor use health centers and clinics more than the rich, such facilities attract little funding from the state (Demery 2000).

Utilization of two key maternal health services (ANC and delivery services) indicates that the richest groups mainly deliver in health facilities in both the public and private sectors. Those who deliver at home were mainly the poor.

On the whole, benefits from using health services are not distributed relative to need. There is an inverse distribution of benefits and need (Hart 1971). The fact that the poor gain less benefits relative to their need whilst the richest gain more benefits relative to their need, indicates the existence of inequities in the Ghanaian health care delivery system. This is despite the introduction of the new financing policy which was expected to reduce the financial barrier to accessing health care services. However, reducing financial barriers alone will not necessarily guarantee the use of health care services (O'Donnell 2007; Ansah, Narh-Bana et al. 2009). Other access barriers to the use of health care are explored in detail in the next chapter.

CHAPTER SIX

COMMUNITY AND PROVIDER FACTORS THAT IMPEDE OR FACILITATE THE PROVISION AND USE OF HEALTH CARE SERVICES

6.0 Introduction

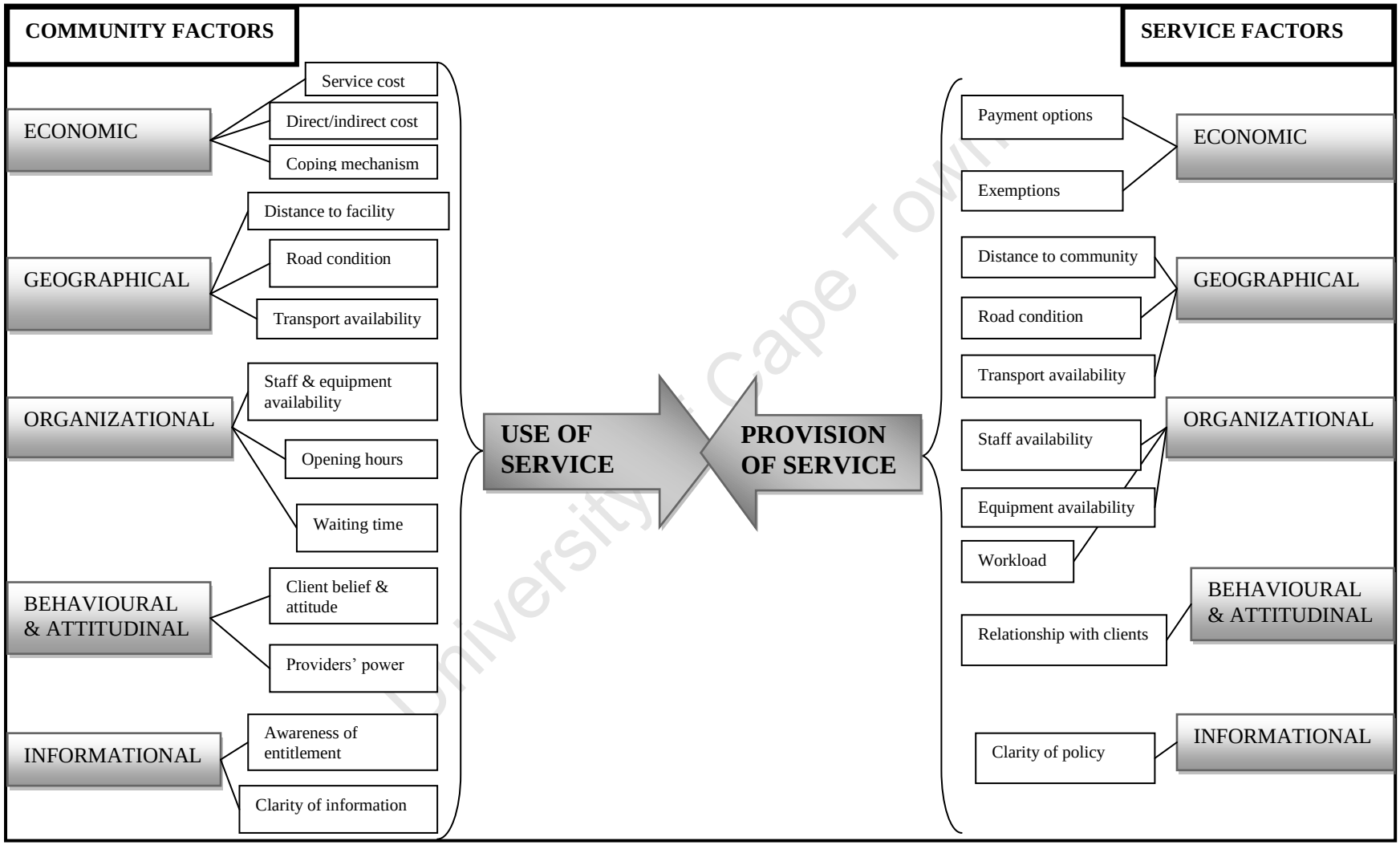
Chapter six presents findings of the qualitative aspect of the study, which focuses on factors that impede or facilitate the use of health facilities. This part of the study employed focus group discussions (FGDs) with community members, in-depth interviews (IDIs) with health care providers and client narratives. A total of twenty-six focus group discussions in rural and urban communities in the six study districts were conducted. In addition, twenty-nine in-depth interviews were held with various categories of health care providers and two client narratives were undertaken with those who had recently used health services.

These findings are presented within the context that clients and providers find themselves and how they influence their relationship with each other. The factors influencing the use of health services are multifaceted and affect both clients and providers. The main focus of this chapter is why individuals who can potentially benefit from health care do not do so and why providers are unable to provide the care clients can benefit from.

The conceptual framework (see Figure 6.1) below portrays community and health service factors. The key issues identified in the analysis are detailed under five main themes which are, economic, geographical, organizational, behavioural and attitudinal, and informational factors and how they affect health care providers and users of their services. The conceptual framework provides guidance as one navigates through this chapter.

The chapter starts with factors that affect community members; it is then followed by provider factors. Also some experiences of clients who had used health care services recently are provided.

Figure 6. 1 Conceptual framework of key factors identified in the analysis



6.1 Community perspective

This section provides an overview of the views of community members about health services and the factors that impede or facilitate being able to use health care when needed.

6.1.1 Economic factors

Several of the focus group discussions (FGDs) identified economic factors as a major concern. As indicated in Chapter 2, Ghanaians are expected to pay user fees for health services. To avoid these out-of-pocket payments, they have the option of contributing regularly to the newly introduced NHIS. Chapter 2 also highlighted that there are very high poverty levels, particularly in rural areas and in the northern regions. Therefore, it is not unexpected that economic factors are a key factor influencing the use of health services in Ghana. The way in which this occurs is explored in more detail below.

6.1.1.1 Direct and indirect costs of seeking care

Fees for health services are often the main focus when considering the costs of seeking health care. Certainly, these fees were perceived to be high by participants of the FGDs, especially for inpatient care, laboratory tests and drugs. A particular concern is that there are often separate fees for each aspect of health services rather than the single point, all-inclusive fee that exist in some facilities,:

> *"They collect money everywhere, at the lab, the dispensary, everywhere".* (Female FGD, urban area)

However, there are usually other direct costs related to using health care that can impose as great (or sometimes even a greater) burden on households (Castro-Leal, Dayton et al. 1999; Ashford, Gwatkin et al. 2006; McIntyre, Thiede et al. 2006; Peters, Gard et al. 2008; Ansah, Narh-Bana et al. 2009; Titaley 2010). Hausmann-Muella (2003) identifies costs such as for transport and special food as particularly important. FGD participants also highlighted that these costs are a concern in the Ghanaian context:

> *"The food served to patients in the hospital adds to the cost of treatment. Instead of the patient paying for only the drugs, the patient pays for food too".* (Male FGD, rural area)

> *"Money for transportation is a problem. After paying for transportation, the money left is not enough to pay the hospital bill."* (Male FGD, rural area)

Transport costs were repeatedly raised as a problem. Many of the FGD participants rely on public transport, and the costs of hiring a vehicle in an emergency are particularly high. The burden of these costs sometimes prevents people from using health services when they are needed, as noted by Olujimi (2007), Wouters (2010) and Goddard (2009) and as stated by some FGD participants:

> *"I recently had a cutlass wound on my farm ... since I did not have money for transport, I had to use herbal medicine."* (Male FGD, rural area)

Over and above these direct costs, indirect costs in the form of productive time lost while travelling to or waiting at a health facility can also impose a considerable burden on households and deter use of health services (Castro-Leal, Dayton et al. 1999; Goddard and Smith 2001; Thiede, Palmer et al. 2004; Oliver and Mossialos 2005; Goddard 2008; WHO 2008; Nonvignon 2010). Once again, the need to rely on public transport can increase travel time (see section on geographic factors). Some FGD participants indicated that they spent several hours at a health facility, particularly if they did not have a social contact (such as a relative or friend) working in that facility. Those with social contacts are usually taken care of quickly.

6.1.1.2 Ability to pay for direct and indirect costs

The direct and indirect costs of seeking care are only part of the story; the other side of the story is the ability of households to pay or bear these costs. The same level of costs may face two households but while one household may be able to cover these costs, the other may not be able to. There are a range of factors influencing ability-to-pay, including employment status, type of employment (whether in the formal or informal sector), health insurance status and the extent of social networks.

The FGDs highlighted that ability-to-pay is particularly a problem in the rural areas. Rural farmers are especially vulnerable as their livelihoods are dependent on external circumstances such as the weather and bush fires, their income is irregular and seasonal, and their ability to access cash is dependent on a readily available market for their produce. Illness is unpredictable, and households that survive on farming activities face problems when illness coincides with a period when cash reserves are low or exhausted:

> *"During the planting and weeding seasons, it's very difficult to come by money. All the money is used to pay for maize seeds to plant."* (Male FGD, rural area)

The ability-to-pay health service fees is improved if a family has health insurance membership, as they do not have to pay these fees at the point of service because the insurance reimburses the provider. However, they still have to cover transport and other non-service direct costs from cash reserves, and paying the insurance membership contribution may be difficult in itself:

> *"The renewal [insurance contribution] is Gh□12 and I have a grandchild and that is also Gh□2. That means Gh□14. I don't have it. Where would I get that money from? I don't make much profit."* (Female FGD, rural area)

Once again, farmers frequently face the largest constraints in terms of accessing cash to pay the insurance membership contributions.

> *"Last year I fell ill and I didn't have insurance since I didn't have money to register because my harvest was bad. The harmattan16*

[16] The harmattan wind blows from the north east across the Sahara. The season is characterized by dry hot days and relatively cool nights from November to late March or April. During the harmattan season, humidity drops to as low as 25% in the northern part of Ghana. Bush fires may occur during this season as a result of the very dry conditions La Verle, B. (1994) "Ghana: A country study."

season destroyed all the maize on my farm and also damaged what I had stored" (Male migrant FGD, rural area).

While access to cash to cover direct costs is an important deterrent to using health care, the ability to bear the indirect costs related to seeking health care may also deter use as it means that the household loses out on income or productive effort during the time that one does not work:

"We don't have any help; we rely on our own strength and when you fall sick, how to leave your work and go to the hospital is very difficult." (Male FGD, rural area)

From the above, it is clear that both the direct and indirect costs can impose a great burden on households and that poor households are sometimes not able to cover these costs from their own cash resources. While this means that many will simply not seek care, where illness is severe or in an emergency, how do households cope with covering these costs? This is considered in the next section.

6.1.1.3 Coping mechanisms

In instances where disease is severe or perceived as an emergency, families who do not have ready cash resort to borrowing from friends and family members or from money lenders. The repercussions of borrowing from money lenders can be devastating as terms of payment are harsh and impoverishing to already vulnerable families. FGD participants mentioned paying large amounts in excess of what they borrowed from money lenders. Other studies have found that such hardship financing is a common occurrence in low-income countries (Kabir, Rahman et al. 2000; WHO 2005; Chuma, Thiede et al. 2006; McIntyre, Thiede et al. 2006; Adam and Xu 2008; Kruk 2009; Onwujeke 2010). Evidence of hardship financing was mentioned by FGD participants in many instances:

"I went for 6 bags of maize and when I went to replace them after the harvest…he said I should add 3 bags of maize. So I ended up returning 9 bags of maize. At the time I borrowed from him, a bag cost Gh□12, when he came for the 9 bags, each maize bag costs

> *Gh□25. His profit was more than □100."* (Migrant male, FGD rural area)
>
> *"When you borrow an amount of Gh□30 you can be asked to pay back Gh□60 or even Gh□80. Borrowing keeps us always in debt so life is very difficult here, if you owe someone, the person will be on your neck till you pay"* (Male FGD, rural area).

Apart from borrowing, which seems to be the first option for many rural families, other studies show that sale of assets or payment by barter are other coping mechanisms for families (Tibaijuka 1997; Wilkes, Hao et al. 1997; Munthali 1998; Nahar and Costello 1998; Lucas and Nuwagaba 1999; Kabir, Rahman et al. 2000; Mock 2001; Russell 2001; Hausmann- Muela 2003; Chuma, Thiede et al. 2006; McIntyre, Thiede et al. 2006; Goudge, Gumede et al. 2007; Adam and Xu 2008; Kruk 2009; Onwujekwe, Onoka et al. 2009). FGD participants frequently mentioned the sale of personal items to generate cash to pay for health care. These findings again are similar to Kruk's (2009) findings where he established that large numbers of people living in low-and middle-income countries (LMIC) borrowed or sold personal items to pay for health care. In Nigeria, Onwujekwe (2010) found the same trend among lower socio economic groups as did Hausemann-Muela (2003; 2009) citing that on average, about 30% of households borrowed money or sold items to pay for health care costs.

While there are a number of different possible coping mechanisms, my research found that the most important mechanism in Ghana is borrowing.

6.1.2 Geographical factors as a barrier to use of health care

Another key barrier to access is the geographical location of health facilities. This relates to the "degree of fit" between the location of health facilities and the population they serve (Penchansky 1977).

FGD participants mentioned distance between communities and heath facilities as a key barrier to the use of health care in many rural communities. In Ghana, most health facilities, both public

and private, are located in urban areas and big towns. Many rural communities have only small facilities that provide rudimentary care. Most of these are private clinics and maternity homes and small chemical shops.

6.1.2.1 Distance to health facility

In Chapter two it is noted that most health facilities are located in the two most populated regions of the country, the Greater Accra and Ashanti regions, and the only two teaching hospitals are located in these same regions in the middle and coastal belt of the country. Plans are underway to build a third teaching hospital in the northern zone of the country (GHS 2007).

Regional and district hospitals are also located in regional and district capitals far from much of the population they serve. Populations needing care must travel long distances to reach them, which are more pronounced in rural than in urban areas (Castro-Leal, Dayton et al. 1999; Mahal 2003; Evans 2005; Ashford, Gwatkin et al. 2006; Peters, Gard et al. 2008; Posse Mariana 2008; Davoodi, Tiongson et al. 2010). FGD participants stress that distances between health facilities and their communities deter them from using the service when they need it.

> *"The health facility is very far, it is about 10 miles"* (Male FGD, rural area)
>
> *"You travel about 9 miles before you get to the health facility. When you are sick and have to travel 9 miles, if God is not on your side, you may die".* (Female FGD rural area)

Several other studies have shown that the farther away community members are from health facilities, the less likely communities are to use the service (Pannarunothai and Mills 1997; Castro-Leal, Dayton et al. 1999; Hausmann- Muela 2003; Morgan 2003; Olujimi 2007; Ghana Statistical Service 2008; Goddard 2008; Posse Mariana 2008; Gulliford 2009; Ai 2010; Nalwadda, Mirembe et al. 2010; Nonvignon 2010; Titaley 2010). This assertion is demonstrated by the comments from the FGD participants and shows their sensitivity to time spent travelling to health facilities as a barrier to access (Heller 1982; Castro-Leal, Dayton et al. 1999; Mensah

2009). Studies have found willingness to travel long distances is greater for urgent and specialist care (Goddard 2009).

6.1.2.2 Road condition

Apart from the long distances between health facilities and the communities, bad road conditions in these areas compound the problem. Many FGD participants in the rural areas particularly stressed the difficulties they go through when travelling on bad roads, especially during the rainy season when the roads deteriorate even more.

Bad road conditions worsen the health of an already sick individual.

> *"If you fall sick and you have to move on that road in emergency cases then you might die. The road will worsen your condition"* (Rural male migrant)

During these seasons, drivers are unwilling to ply the bad roads or alternatively charge higher than usual fares, as was also found in Nigeria (Olujimi 2007). To compound the problem, passengers and drivers have to wait till vehicles have reached their full capacity of passengers before moving to their destinations. This can take several hours "*because the driver doesn't care whether there is a sick person in the vehicle or not".*

6.1.2.3 Transport availability

Transport availability in these communities is also a major concern to many seeking care (Morgan 2003; Ricketts and Goldsmith 2005; Goudge, Gumede et al. 2007; Olujimi 2007; Peeling 2007; Goddard 2008; Ansah, Narh-Bana et al. 2009; Davoodi, Tiongson et al. 2010). In many instances, people needing health care do not own vehicles and use public transport. However, public transport is irregular and not available on some days.

> *"If the illness is sudden getting transportation here is very difficult."(*Female FGD, rural area)

> *"People collapse and there is no car to take them to the health facility. A female teacher was badly wounded by a tractor but there was no vehicle to convey her to the hospital".* (Male FGD, rural area)

> *"The family run around looking for a car until the person dies and the car is not yet found. What can we do?"(*Female FGD, rural area)

In emergency situations, families of sick people have to hire transport at exorbitant costs. However, for delivery services, women in rural communities far from health facilities prefer to deliver at home with the traditional birth attendant (TBA) than struggle to get transport to the health facility.

Another barrier to the use of health services is the organization of the health service and the extent to which this fits or is acceptable to the population needing care. The following section highlights this problem.

6.1.3 Organizational factors

After struggling to get to the health facility, the question now is will the facility be open, what is the range and type of service provided in relation to the need of the client, will there be staff available and what about drug and equipment availability? Apart from these, other important organizational factors such as facility layout, waiting time, availability of appointments and privacy are also of importance to clients. When these are not harmonized with the needs of clients, many simply do not use the service (Gilson 2007; Posse Mariana 2008; WHO 2008; McIntyre, Thiede et al. 2009).

These organizational concerns mentioned by FGD participants are examined in the rest of this section. Another key factor is staff attitude which will be considered under behavioural, attitudinal and cultural factors.

6.1.3.1 Staff availability

On the whole, limited availability of staff is of grave concern to all groups, but this is particularly the case in rural communities. FGD respondents blamed the long queues, long waiting time and negative staff attitudes on the lack of staff in public health facilities:

> *"Here, we don't have many doctors. Sometimes, only one doctor is available to look after all of us, you have to wait and they can tell you to return the next day. "* (Male FGD, rural area)

Participants in rural areas were particularly concerned about the lack of skilled staff to deal with serious medical conditions of clients; however the type of staff available is influenced by human resource policies of government (Gilson 2007; Goddard 2009). For example it is not surprising that rural areas lack skilled staff as many highly qualified staff refuse posting to deprived communities. This has consequently led to frequent referrals of seriously ill clients to higher levels of care.

Many participants expressed their discontent with referrals given the difficulties with travelling as mentioned above. FGD participants narrated the grim conditions communities go through in the quote below:

> *"There are no doctors here… sometimes when referred, on the way they die. They were sending a sick woman to the hospital… she died"* (Female FGD, rural area).

FGD respondents are frustrated that providers in their local health facility lack the requisite skills to deal with their health care needs, resulting in many going directly to facilities they trust as they have the requisite staff to deal with their health problems:

> *"The reason why we trust the hospital is that those there are qualified doctors, but those here, when you go, they will diagnose a different disease altogether" (*Rural male group).

A client narrative highlights some of these issues, as shown in Box 6.1.

Box 6. 1 Extract from client narrative.

> Akua is 28 years old and has two children; she was pregnant with her 3rd child. On one of her visits, she was asked to go home and bring her things. She got back to the health facility around 6pm. On her return, the nurse who had taken care of her in the morning informed her she had closed for the day.
>
> She was bleeding and was detained till the next morning. She spent 12 hours at the health centre before referral to the hospital. She informed the provider about blood in her urine but nothing was done and nobody explained anything to her.
>
> She had surgery at the hospital but she lost the baby. She recounts "*I don't know why they wasted time at the health centre that is why I lost the baby"*. Since then she does not like going to that health centre.

It is therefore not surprising that some clients prefer to go to hospitals outside their localities. Some participants pointed out they have more confidence in hospitals than in health centres explaining that hospitals handle all diseases while health centres take care of only a few. They requested that doctors should work in smaller facilities since small communities also have serious health problems:

> *"One thing that worries me about the health workers here is that when you get there they would refer you to Okomfo Anokye. If that is the case what is their use? Personally I have decided not to go to the clinic even if I am ill".* (Male FGD, urban area)

> *"We have more confidence in Battor hospital; they take care of every sickness. Apart from Battor, we don't have confidence in our health centre* (Male FGD, urban area).

Clients prefer skilled providers to attend to them but, with the shortage of staff in many facilities as indicated earlier, health aides have been trained to assist professional staff but FGD participants are not satisfied when the newly trained cadre attend to them:

> *"The nurse left the work for those in the pink*[17] *who do not know how to give an injection..."* (Female FGD, rural area)

Strike action has also been a hindrance to receiving critical care. An experience is narrated in the quote below:

> *"I was in labour and my husband took me to the clinic, but they said we should get away from their sight because the doctors were on strike. We rushed back home to the TBA and I gave birth.* (Female FGD, urban area)

Male FGD participants particularly self-refer without exploring the possibility of treatment of their health care need at the lower level due to limited services at the local level and resultant referrals, but that depends on their financial ability. As also noted by Akin (1999), community members know the type of service they prefer and are willing to seek alternative care despite the distance and cost:

> *"There are some ailments that are beyond their capability so they refer you to Okomfo Anokye Teaching Hospital. If you go to the health centre and you need drip they take care of you, but in a situation where you need blood transfusion you would be referred to Okomfo Anokye"* (Male FGD, rural area)

[17] Health Aides recruited by government to assist providers with non technical aspects of health delivery, wear pink uniforms.

The male groups were of the view that health centres within their communities comprise of providers with skills and facilities for women's health, particularly pregnant women and children, and consequently have low expectations in using peripheral health facilities and consider them as not being gender sensitive:

> *"The hospital was built here to cater for everybody but the nurses available only attend to deliveries…You would be shocked to go there right now and find only one pregnant woman giving birth in the whole big place"* (Male FGD, urban area).

> *"The providers here take very good care of the children by can't treat adults very well."* (Male FGD, rural area)

6.1.3.2 Availability of drugs and equipment

Furthermore, the lack of drugs and equipment was raised as a concern by FGD discussants. Many rural facilities lack these resources which *are* important in promoting the use of health services (Ashford, Gwatkin et al. 2006; Peeling 2007; WHO 2008). The issue came up repeatedly reflecting how clients perceive this as an important element in their seeking health care.

Many have written-off facilities in their localities as capable of managing only minor ailments hence do not visit such facilities when they perceive they have serious health problems. Without diagnostic equipment, effective diagnosis and treatment is difficult and people demand quality care whether at the health care centre or the hospital level:

> *"The last time I went to the health centre they could not detect what was wrong; they gave me lots of drugs but I did not get cured, so now I don't go to the health centre. I just go to the private clinic".* (Male FGD, rural area)

Furthermore, previously insured members are deterred from re-registering due to this problem. Insured clients feel cheated when they have to pay out-of-pocket for prescribed drugs from the drug store. It is even more frustrating when clients have to travel long distances to purchase prescribed drugs:

> *"When you go to the clinic they tell you they don't have drugs so you buy from the drugstore. If you have the money, you simply buy it from the drug store, which is better than go and be told the drug is not there"* (Female FGD, urban area).

> *"They tell you point blank that they don't have the medicine you are supposed to take, so they would give you prescription and ask you to buy the drugs. When it happens this way it makes the scheme useless"* (Male FGD, urban area)

6.1.3.3 Opening hours

Another theme brought to the fore concerned the opening hours of health facilities. In Ghana billboards at health facilities indicate that there is 24-hour service provision but this is usually not the case. Many facilities do not open on time and some departments, such as the dispensary and laboratories, are closed out of normal working hours: late night, at dawn and at weekends.

The unpredictability of opening hours has been cited as a barrier to access (Gilson 2007; O'Donnell 2007; WHO 2008; McIntyre, Thiede et al. 2009; Chuma 2010) and FGD participants confirmed this experience particularly in many small rural facilities. They revealed that opening hours are unpredictable and at the discretion of the provider in rural areas irrespective of government policy.

FGD participants in rural areas expressed their frustration about their inability to use the facility until the provider sees it convenient to allow entry. They claimed providers have taken the health facilities as their personal property and several rural communities feel powerless in changing the stance of providers:

> *"The nurses here have taken the hospital as their property. Sometimes when you go there with an emergency in the evening, they tell you they are sleeping..."* (Male FGD, urban area)

Some participants maintained that even when facilities are open, providers usually arrive late and show "no sign of urgency to see to sick patients". This was cited as a deterrent to use:

> *"The general hospital is supposed to be opened 24/7 but if you go at dawn you would see the nurse not the doctor. They would tell you the doctor has left..."* (Female FGD, rural area)

Providers have developed their own working routine as also identified by Erasmus (2008), and have breaks when it best suits them, giving them power over clients and tasks. Such instances were cited by FGD participants.

> *"The nurses said they were going to pray, after that they said they were going to have breakfast. They finished all that before attending to me.* (Female FGD, rural area)

Insured clients in the FGDs reported being charged illegally for seeking care at night or over weekends. Clients are forced to use alternative providers such as chemical shops and pharmacies which are available all the time.

6.1.3.4 Waiting time

Not only are opening hours of concern to clients, waiting long hours in a health facility is a disincentive to use (Gilson 2007; Peters, Gard et al. 2008; WHO 2008; Chuma 2010). Long waiting times was reported by several FGD participants:

> *"I visit the hospital and spend the whole day there. I come home in the evening. It's a problem, it worries us a lot"* (Female FGD, rural area).

Instances of patients dying in the long queues were also reported:

"We were struggling in the queue not knowing a woman was dead in the queue, she did not move and that drew our attention to her. It's as if the providers are not serious with us. They don't feel anything for us. I arrived around 6am and as at 6.30pm I was still on the same bench" (Male FGD, rural area).

"Sometimes you would wait in the line for a long time for your drugs. The general hospital really like doing that even if you are in severe pains" (Female FGD, rural area)

In urban communities, participants attributed long waiting time in hospitals to late arrival of doctors and their performance of routine ward visits before seeing to outpatients. Revelations of providers asking sick clients to return the following day when they perceive cases as not serious to deserve immediate attention was of grave concern to FGD participants.

6.1.4 Behavioural and cultural factors

Behavioural factors are a major impediment in the use of health services and rural communities suffer the brunt of this. In this analysis, these factors had the highest coded segment, indicating the frequency with which it was cited as a concern for clients in both rural and urban communities. Issues discussed focussed on clients' experiences of their interaction with providers. Staff attitude was overwhelmingly a huge concern and many have had personal experiences of poor staff attitudes.

Socio-cultural issues cited by FGD participants that create positive provider behaviour include, having a social contact within the health facility [18]as cited by (Franco, Bennett et al. 2002), being a formal sector worker, speaking the same language as the provider, higher socio-economic status and being educated, among others. From the focus group discussions, it was evident that the poor, rural dwellers, migrants, women, insurance members, the less educated, those with

[18] Clients with social contacts such as family, friends and relatives working within a health facility are taken care of quickly by health providers with the assistance of these social contacts

difficulty in speaking the provider's language, and having no acquaintances within the facility makes one susceptible to negative conduct by staff. These issues have been described as the acceptability dimension of access and often present a major barrier to access (Penchansky 1977; Ashford, Gwatkin et al. 2006; Dixson Woods 2006; Gilson 2007; McIntyre, Thiede et al. 2009; Chuma 2010; Wong 2010).

In Box 6.2 below, a client narrates her experience with a provider in a health facility.

Box 6. 2 Extract from client narrative

Yaa is a farmer and had very little education. She is pregnant with her 3rd child. She did not visit the health facility for ANC because she did not have money to pay for transport. She was unaware of the free maternal care, because as she puts it, "*I didn't go to school much and therefore didn't know what was going on"*. Someone mentioned the free maternal care to her. She registered in her eighth month and delivered a month after.

At the labour ward, she recalls "*the nurse told me she was going to her house close to the clinic and that, I call her when my water breaks. When my water broke, I called her. She left again, before she returned, I had delivered but, if I hadn't stretched my hand to hold the baby, it would have fallen on the floor. She told me she didn't know I would give birth that soon"*.

She was asked to pay GH 6.00 and she explained to the nurse that she had insurance cover. The nurse asked why she did not mention this earlier and insisted that she has to pay since she had already written a receipt. "*I didn't have any money, I begged her until she finally agreed"*.

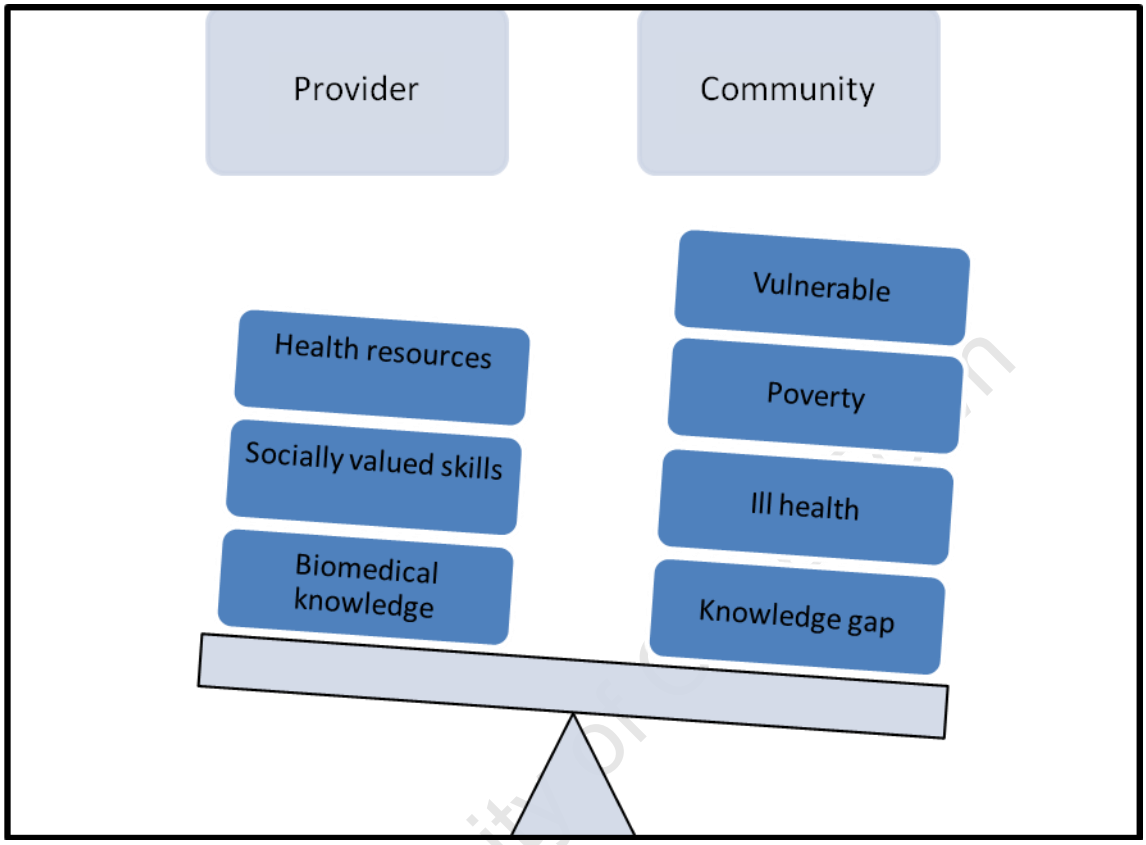
From the FGDs, it was evident that generally the interactions between clients and providers reflect the power relations between the two (Erasmus 2008; McIntyre, Thiede et al. 2009; Nika 2009), described as 'social distance' between providers and clients (Ashford, Gwatkin et al. 2006). In the next section, the source of power of providers is highlighted and how this affects their relationship with clients. This is followed by participants' concerns about staff attitudes as expressed in the FGDs.

6.1.4.1 Provider's power

Provider's source of power can be explained by their biomedical and professional knowledge and associated respect and trust by the community to manage their health problems. In Ghana, as in other cultures, the medical profession is generally respected (Hall 2002; Ham 2002; Watts 2008). The public gives them the power to see to their health and the government provides the health service with resources to perform this role.

On the other hand, the population lacks the biomedical knowledge that providers have (WHO 2008), and when faced with ill health and poverty, many become vulnerable. Their vulnerability places them at the mercy of providers (Mills, Brugha et al. 2002). Figure 6.2 below illustrates the differences in power between providers and the community.

Figure 6. 2 Power relations between the provider and community



By and large, there is an imbalance in power between providers and clients and this frames the many complex interactions between the two. Freedman and Waldman (2005:11) stated that "abusive, marginalizing, or exclusionary treatment by the health system has come to define the experience of being poor" and attributed inequities in access to the distribution of power between people, as did Mooney (2009) and Coburn (2007).

It is therefore not surprising that many FGD participants have experienced poor treatment by providers. However, those with power in society tend to get better attention and treatment in different spheres of life including health care.

In Ghana, OPD attendance has increased dramatically since the introduction of the NHIS (see Figure 2.9 in Chapter 2) without a corresponding increase in provider numbers (see Chapter 2

Figures 2.6 and 2.7). Many providers are stressed and discretionary power is exercised as a way of dealing with challenges in their working environment (Erasmus 2008; Onwujekwe, Onoka et al. 2009).

The practice of frontline providers modifying policies to suit them, as identified by Lehman and Matwa (2008) was confirmed by FGD participants, particularly in rural areas. Some examples are opening facilities at hours suitable to providers, refusal to exempt qualified clients, charging insured clients during certain hours and refusal to travel to communities that provider's think are unresponsive to their outreach activities. These negative attitudes continue due to inadequate monitoring and supervision (PPME/GHS 2008).

Negative provider attitudes, mostly directed at the poor, were confirmed by FGD discussants:

> *"...The nurses and doctors don't have patience for us since they are educated people and we are not."* (Male FGD,rural area)

> *"At the facility when you are called for your drugs, and you walk slowly due to your ill health, the nurses get angry and shout at you saying you drag your feet too much"* (Female FGD, rural area).

These examples confirm Gilson and Schneider's (2007:4) statement that the "socially disadvantaged and marginalised groups are more likely to bear the burden of discriminatory provider attitudes and poor communication practices."

On the other hand, community members in leadership positions and economically better off indicated in the FGDs, that they were treated with respect and dignity:

> *"Because I have a leadership title, they always attend to me earlier, but if you go there and you are an ordinary person, they don't mind you and that shouldn't be the case" (Male FGD, rural area).*

Others who get better treatment are those with social contacts such as family and friends, within the facility:

> *"If you know the nurse and you come you just enter and greet her and she would see to you but, if you don't know the nurse you would keep long in the queue… without any relative or friend in the general hospital you would suffer"* (Female FGD, urban area).

6.1.4.2 Ethnicity and language

Discussants in the FGDs indicated that those who speak the same language as the provider get better treatment confirming that communication difficulties act as a barrier to seeking health care (Penchansky 1977; Dixson Woods 2006; Goddard 2008; McIntyre, Thiede et al. 2009)**.** In addition, as stated in Chapter 2, one of the large political parties has a following in rural areas, among certain ethnic groups and northern Ghana. Stereotyping of clients from these parts of the country by providers was mentioned as grounds for negative treatment.

6.1.4.3 Insurance status

Another worrying trend is that increasingly the insured are categorized as frivolous users. Insured clients in the FGDs mentioned being labelled as '*frequent users for trivial cases*' and are poorly treated. Some mentioned receiving a limited range of poor quality drugs and being asked to join long queues. Some claimed insured clients are discharged early from hospitals to reduce costs to the government. These experiences have deterred the subsequent use of health services and stopped others from joining the scheme:

> *"The health insurance is good especially for us the poor, but one problem is that, the health providers tend to be cold towards us, maybe because we are not paying anything to them. "They discriminate against us. I don't understand" (*Male FGD, urban area)

> *"When you are insured, you have to wait for the uninsured to be treated first. Those without the insurance card have money so they are seen to first, because they can pay."*(Male FGD, urban area)

> *"The providers pay better attention to paying patients as compared to the insured patients."* (Male FGD, rural area)

Some FGD participants wanted to know why nurses ask clients about their insurance status and why insured and uninsured clients join different queues in some health facilities and also what contributes to the long waiting time especially for insured clients. The long waiting time has not been explained to insured clients and this discourages them from joining the scheme which may consequently affect access.

> *"Why do they treat them first? They should stop treating those without the insurance card first and treat us on first come, first served basis. If they continue these things it will discourage others from joining the scheme"* (Male FGD Rural area)

These findings support Penchansky's (1977) assertion that providers are unwilling to accept clients who do not make payments. In fact, in some rural facilities insured clients in the FGDs reported being told that "*insurance time is over after 2pm".*

6.1.4.4 Trust

A common occurrence in many health facilities in Ghana is the sale of food and medical supplies by providers to clients seeking care. FGD participants were unsure if the medical items sold are supposed to be free for clients or not. Uncertain of these transactions and their entitlements, they consider such actions as unethical and the turning of health facilities into market places to make extra cash.

> *"They need money so they sell in the hospital. They sell theirs [supplies] and leave those supplied by the government."* (Female FGD, urban area)

These actions promote mistrust among clients. They mentioned that pregnant women were particular targets of this act:

> *"They try all means to make you pay some money. My insured sister went to deliver and had to buy stuff and drug before she left the facility, we spent more than Gh□10. So I asked myself then what is the importance of the insurance? We had to pay for drip. The government said it's free for pregnant woman so she shouldn't pay for anything."* (Female FGD, urban area)

The above quotes show the distrust among clients; as Gilson (2007) stated that providers attitudes and actions could lead to clients' perceptions that providers are more interested in making money than addressing clients' health.

6.1.4.5 Community's health belief vis á vis provider's biomedical knowledge

Communities have their beliefs concerning disease causation and management (Hausmann-Muela 2003). Differences between these beliefs and those of the provider can contribute to negative perceptions about providers' competency and the treatment they provide and clients' willingness to adhere to providers' advice. FGD participants mentioned divergence between providers' diagnosis and treatment and the expectations of clients. It also came to light that, when diagnostic equipment is not employed in diagnosis, some clients have doubts about the diagnosis and have refused to comply with providers' advice. There are instances when clients believe their conditions cannot be handled at the lower level and have themselves asked for referrals and the providers have refused. These differences had led some FGD participants to stop accessing services in their communities and to describe providers as being insensitive.

6.1.5 Information factors

Another important factor that facilitates access to health care is providing information to clients about their entitlements and about health care in general. Important information factors that emerged from the FGDs are examined below.

6.1.5.1 Knowledge about entitlements in terms of health insurance

From the FGDs it was clear that many participants are unaware of their entitlements and therefore are unable to access the services to which they are entitled. The subject of entitlement was identified by Goddard (2009) as a hindrance to access by minority groups, and likewise by FGD participants.

Many FGD participants were unclear on the entitlements of the insured, for example what diseases and drugs are covered by the NHIS and why certain drugs are provided and not others:

> *"We are spending a lot of money on the drugs. The insurance has to cover everything especially the drugs. But if you go, they will give you only two or three drugs; maybe paracetamol and vitamin B complex. Then they write the expensive ones for you to buy. Why?* (Male FGD, Rural area)

> *"They should give us all the medicines at the hospitals. They should not write for us to buy. Even if the medicine is not available they should pay for us. That is the reason they asked us to register. If you register and they wouldn't pay for the drugs for you, what have they done?".* (Female FGD, former NHIS member)

The lack of understanding about clients' entitlements has discouraged former members from registering after their cards expire and this will result in some not having access to health care in the future.

> *"They gave me drip and asked me to buy the rest of the medicine, so that day if I weren't having money on me, I would have been saying insurance and die just like that. When the card expired I decided not to renew it"* (Female FGD, former NHIS members)

Formal sector workers in the FGDs, wanted to know about deductions from their SSNIT contributions, whether deductions are monthly or yearly and their total deductions per year. Some want formal sector workers to be exempted from paying for any service, since they believe they contribute substantially to the NHIS.

Furthermore, others want clarity on whether the NHIS covers only first aid or comprehensive care and why some services are paid for by the insured.

Some of those who have difficulty in finding money to pay their premiums expect to be allowed to access services the following year if they did not use health service in the previous year. Some have difficulty if they have to pay premium again to use the service.

> *"Most people are still ignorant about the health insurance, they convince them to register but they say that when you register and you don't fall sick, when the year elapses and they have to register again it's a waste so we need more education"* (Female FGD, formal worker)

Yet others want to know why it takes so long to get their insurance cards after registration. People who have registered and paid premiums revealed they had to wait for months to get their insurance ID cards to use the service. Some FGD participants indicated that they are unable to access services as they have no card though they are fully paid up.

Generally many respondents in both rural and urban communities have not understood adequately the operation of the health insurance and providers take the blame for this. However, providers themselves are not clear on some aspects of the scheme.

6.1.5.2 Clarity on information by providers

Appropriate and efficient outreach service provision is one of the strategies to facilitate use by many poor rural communities who are often far away from health care facilities (MOH 2005). In Ghana, outreach services are often provided to communities once a month. Outreach services

include Child Welfare Clinics (CWC) which entails weighing of children and immunizations. Treatment of minor ailments is provided and referrals made where appropriate.

Mothers in the FGDs gave various reasons for not attending CWC: some of them are not clear on immunization schedules and are unable to read messages on the weighing cards to take appropriate action. Mothers' non-adherence to immunization schedules in some rural communities is attributed to laziness and punished by discontinuing visits to such communities by providers and thereby hindering use of this service, as this quote indicates:

> *"Previously they were coming but stopped coming for two years. They said when they come, the women don't take their babies for weighing, so they ask that those who want to weigh the babies should bring them to the district capital."* (Male FGD,rural area)

6.2 PROVIDER PERSPECTIVE

This section provides an overview of supply-side factors that impede or facilitate access to services for the population. In-depth interviews (IDI) were held with different categories of providers; these were health managers, doctors, nurses, a pharmacist and administrators. The majority of the interviewees were nurses involved with clinical and outreach work. Most of the providers were public health service providers. Three private providers were also interviewed. All quotes included in this section are from public sector providers unless otherwise specified.

6.2.1 Economic factors

Providers acknowledged in the IDIs that clients have difficulties paying for health care costs. In one of the deprived regions of Ghana providers stated that "s*ome struggle to get their daily bread and often leave facilities with debt"* affecting the finances of health institutions negatively. One mission facility lost over GH□25,000 in a year due to clients' inability to pay.

To prevent this occurrence, both public and private providers accredited by the NHIS have devised ways of getting their clients to become NHIS members by encouraging clients to register. In the IDIs providers mentioned providing NHIS registration forms to uninsured clients visiting their facilities to register to remove the burden of direct payment of health care costs from clients.

6.2.1.1 Payment options

Direct payments are made by those without insurance cover. Due to difficulties clients face in paying for care, providers may give the option of delayed payment:

> *"What I do for them is that I give them 2 to 3 weeks to pay, if they don't come back to pay the next time they fall sick they stay at home even when the illness gets worse"* (Nurse in-charge).

Free care is provided to those uninsured who are declared paupers by social welfare officers or at the discretion of health managers and/or providers. This is done by looking at the type of

ailment, the physical appearance of the client and an interview with the client and any family members accompanying clients.

Providers in the IDIs stated, however, that free care is provided discreetly, *"because if you allow them to go, and the insured get to know, they will feel reluctant to continue with the scheme".*

Other clients are only provided with a free consultation but are charged for drugs. In cases where clients cannot afford a full dose, they are provided with doses they can afford, even if it is not the full dose, but providers explained that:

> *"When drugs are prescribed they are not able to pay. They have to go and come back for drugs later but some don't come back."*
> (Hospital administrator)

Accredited health facilities provide services and later get reimbursed by DMHISs. In the interviews with providers they referred to frequent reimbursement delays but despite that many accredited providers are willing to provide services to insured clients. They attributed that to the certainty of being reimbursed eventually, despite long delays. They stated that their revenue generation has increased whilst bad debts had decreased. They also maintained that the NHIS scheme has not only increased their clientele but has also improved their financial position.

6.2.2 Geographical factors

Geographical factors affect providers as much as clients. The details on how these affect providers are presented below.

6.2.2.1 Distance to communities

Distances to communities to provide care are a challenge. Problems are faced by both outreach and static providers. Travelling to outreach points and to regional capitals for drugs and other medical supplies is a challenge as these points are great distances away.

6.2.2.2 Road condition

Another challenge is the road conditions in many areas. Providers simply decline postings to rural communities due to bad roads. Those who do work in these areas and provide outreach

services simply avoid travelling to certain areas when the road is cut off during the rainy season. Below are quotes from outreach providers:

> *"During the raining season, we are unable to go there because we cannot cross the river which overflows its banks. Since I came here I have not been to that place"* (Outreach provider)

> *"We have hard-to-reach areas. When it rains we don't go to those places"* (Outreach provider)

6.2.2.3 Transport availability

Apart from the bad road conditions, providers face transportation problems. Though there are vehicles and motorbikes at some health facilities, frequent breakdown of these vehicles and a poor maintenance culture makes travelling difficult. In the IDIs, providers also reported having insufficient funds for fuel.

> *"We have only one motorbike for outreach. If the motor is not in good condition or we don't have fuel then we have to wait until all these are settled"* (Nurse, outreach provider)

> *"We don't have ambulance; it is a problem. Yesterday we had to refer a case and had to go and find a taxi. The lack of transport is a problem. It is not easy to refer a case."* (Nurse, health centre)

Using public transport for outreach services is an alternative and providers face similar problems as the rest of the community, waiting for long hours and experiencing a lack of transport on some days. Some providers simply walk to outreach points in these areas. Other health care providers mentioned challenges in conveying drugs and medical supplies from the regional level to the lower level health facilities in public transport, which affects their provision of services.

6.2.3 Organizational Factors

Organizational factors that affect the provision of services from the provider's perspective are similar to issues raised by clients in the FGDs. For example, unavailability of drugs and

equipment, and the increasing number of clients without a corresponding increase in staff numbers results in stress and poor attitudes. These are examined in detail below.

6.2.3.1 Drug availability

By and large, most providers in the IDIs indicated that drugs on the essential drug list are usually available, whilst those not available in the facility can be obtained from accredited pharmacies. Nevertheless prescribed drugs not on the essential drug list are paid for out-of pocket even for insured clients.

> *"The NHIS has its drug list so if the drug you prescribe does not fall within the drug list it means the NHIS will not pay so you ask the person to go and buy the drug."* (Provider, district hospital)

However, providers mentioned that sometimes they experience drug shortages and this leads to conflicts which discourage some from seeking care as they prefer obtaining all prescribed drugs from the health facility.

> *"Though essential drugs are available sometimes we experience shortages and insured clients are not happy."*(Nurse, health centre)

> *"The shortage of drugs is a problem; anytime you get to the hospital they [clients] are either insulting the staff or making a lot of noise"* (District Director).

Given that sometimes all the prescribed drugs are not able to be dispensed, particularly to the insured, some clients perceive services rendered as poor quality and as a result do not use the facility in the future.

> *"Since the insurance was introduced it has been both encouraging and discouraging… when it gets to the point where patients have to buy drugs, it puts them off. They feel reluctant to continue coming."*(Nurse, health centre)

Additionally, some insured clients expect to be provided with more drugs and are dissatisfied when provided with what they perceive as inadequate drugs, as noted in the quote below:

> *"They expect us to give them more drugs because its health insurance. If you give one they want two, if you give three, they want four or five. If you tell them to come back if they are still not okay after taking what you have given them, they squeeze their faces."* (Accredited private provider)

Surprisingly, providers in the IDI also perceive services provided to the insured as poor due to the restrictiveness of providing only drugs on the approved drug list. Providers attributed this phenomenon to why some do not join the scheme. This can be a barrier to use should one fall sick and be unable to raise funds to access care.

> *"Some of the drugs are very effective but the insurance does not cover those, farmers have waist and knee problems but the drugs they need is not covered under the scheme and they are more expensive. Now if you don't have insurance you are treated better than you are when you have it."*(Nurse, health centre)

Another issue that has direct links with drug availability is the persistent delay in reimbursement from the NHIS. Hospital Administrators cautioned that such delays can compromise drug supply and provision of services in the future. It was revealed in the IDIs that many facilities are indebted to drug suppliers which was not the case during the "cash and carry" era (see Chapter 2).

During that era, health facilities were sure of cash inflows and management planning was easier. However though the generation of revenue has increased with the introduction of the NHIS, cash flow has deteriorated.

Another issue of grave concern is the unavailability of blood products which providers indicate is an important element of treatment but is not covered under the NHIS. Therefore clients, whether with insurance cover or not, have to find and pay blood donors themselves.

> *"Insurance doesn't provide blood. The clients have to look for someone to donate and pay the donor. If you ask the client to look for a donor, he will say since he's insured and since the doctor says he needs blood then we must give it. This brings about argument between the client and the health care provider."*(Nurse, district hospital)

These make it difficult for providers to provide critical services to clients even when they are insured, confirming clients' assertions in their FGDs that the insured pay for drugs and other services.

6.2.3.2 Availability of equipment and other physical infrastructure

Available equipment provides an enabling environment for the provision of health care services. The MOH (2009) reports that equipment is unavailable in several facilities. This problem was confirmed by providers in the IDIs and cited as a key reason for referrals.

> *"Our laboratory needs improvement. The theatre needs some monitors to help us when we are operating. We have two monitors but one got spoilt and the other one doesn't perform very well"* (Medical officer, district hospital).

> *"The things we have are obsolete. We need modern equipment. Currently the pressure is high but we are managing, we deal with lives, and we can't joke with someone's life."* (In-charge health centre)

There were reports of delivery wards without lights in rural areas in particular.

> *"We don't have any source of lights; not even lanterns. We use torch light to treat in the night and even for delivery."*(CHO, CHPS)

The lack of equipment results in frequent referrals to higher level facilities, which are usually located in urban areas. The poor are unable to move to these referral points affecting the use of needed care.

With the increase in utilization (see Figure 2.9 in Chapter 2) the limited space in many facilities leads to congestion in waiting areas. Many patients are forced to sleep on benches in the corridors due to lack of space in the wards thus compromising patient's privacy and care.

6.2.3.3 Staff housing and facility conditions

Another concern of providers in the IDIs linked to the above is that, generally over the years, little has been done about staff accommodation particularly in rural areas. Staff residences are inadequate and in bad condition, forcing some to hire accommodation far from health facilities:

> *"Our main problem is accommodation; the condition of the one room we have is bad. It's been there for years without any maintenance. It's a death trap; we've complained several times but nothing has been done"* (Nurse, health centre).

> *"The environment is not anything to write home about. The structures were put up in the 1940s and 1950s and they are the same structures with mud not with cement and block"* (In-charge, Health centre)

Not only was staff accommodation in bad condition but also some health facilities. These are a source of concern for providers.

> *"The place itself is not conducive. It is so dilapidated and you wonder whether people get treatment from this facility, because it*

> *is a death trap, not a place where people will come and get healing. All these add to frustration of health workers"* (In-charge, Health centre)

These unfavourable conditions affect staff negatively in the provision of services to clients.

6.2.3.4 Staff availability and workload

On top of these conditions providers have to contend with increasing client numbers as a result of the introduction of the NHIS and free care for pregnant women, as mentioned in Chapter 2. This has increased their workload. However, professional staff numbers remain largely unchanged.

> *"Previously we get about 50 patients in the whole week but now we see between 20-30 patients in a day."*(Hospital in-charge)

> *"One person will say nurse do this for me and, at the same time another will say do that for me, who will you attend to? When you go to one, the other client will get angry. It creates problems between clients and us."*(Nurse, health centre)

Providers have repeatedly requested more staff. Government has trained a new cadre of health assistants but these have limited skills and professional staff still do most of the technical work.

> *"At the health centre, you are the consultant, the doctor, the nurse, the pharmacist, the secretary, the accountant; you are everything."* (Health centre in charge)

Consequently, tiredness, stress and overworked providers are unable to give of their best, as cited in other studies (Gilson 2007; Olujimi 2007), which leads to poor provision of service and conflicts between clients and providers in some cases. Such incidents have discouraged clients from using the service for fear of negative treatment. The effect of increased workload on the client-provider relationship is highlighted in more detail under behavioural and cultural factors.

6.2.3.5 Staff incentives

With the increase in workload, health staff expected to receive additional incentives but this has not happened across the board. In particular lower level staff feel marginalized. This sentiment is expressed in the quote below.

> *"In fact we work 24 hours including weekends but they don't add anything to our salary as they told us..., they are not motivating us."* (CHO, CHPS)

> *"Staff come here and the conditions are so poor that they will not work. They go away. The staff turnover is high. You work and at the end there is no money"* (In-charge, health centre)

Nevertheless, some providers in the IDIs mentioned that morale in the service is better than previously and referred to the MOH/GHS car loan scheme, study leave with pay, payment of utility bills by management in some deprived facilities and fuel allowance in others as good examples of incentives. Regardless of these initiatives, more is expected from government.

6.2.3.6 Staff development and morale

Given the bad working environment providers find themselves in, providers particularly in rural areas mentioned in the IDIs that staff morale is affected. Providers in rural areas perceive the development of staff as unfairly distributed among rural and urban located staff. Some revealed that they have not attended training for years. Others complain of neglect because managers do not visit their facilities. These occurrences affect staff morale as has been found in other studies (Gilson 2007).

> *"We need someone to tell us our work is good, keep on doing it, someone to appreciate what you do. It is all part of boosting your morale. I am not particular about what they give me but about how they appreciate the work I do"* (Dispensary assistant, health centre, rural area)

> *"We are really sacrificing, we are human beings and sometimes it's not the money but someone to just say well done is important to us."* (Nurse, health centre, rural area)

Another concern is the delay in promotion and lack of training in information technology to enhance work.

6.2.4 Behavioural and cultural factors

Socio-cultural factors that affect provision of services have to do with provider behaviour in the way they relate to clients due to client's language, gender, ethnicity, socio-economic characteristics and how this influences their behaviour towards clients (Gilson 2007; McIntyre, Thiede et al. 2009; Voetagbe 2010). In-depth interviews with health care providers confirmed that the social standing of clients influences the behaviour of providers as mentioned by Gilson (2007). Providers confirmed that they attend to local chiefs quicker for cultural reasons.

> *"...with the chiefs because they are the rulers of the land… they must not be delayed"* (In-charge, health centre)

Providers indicated that they expect educated clients to know better by insuring themselves and their families. Providers therefore get irritated when such clients find it difficult to pay for services. Clearly from the IDIs, there is a stereotyping of insured clients, thus, providers are dismissive about the health problems of the insured and this clouds their judgment in their handling of insured clients. A provider indicated how she deals with some insured clients:

> *"We have been doing it. When they come we talk to them and those who are not sick we just give them some multivite and they go. If you see that it is not serious and the person has come, you can just get some multivite for the person to go"* (Medical assistant in charge)

Such treatment confirms Gilson's (2007) statement about stereotyping some clients and negative treatment by the provider. Below is another example of a provider's statement concerning insured clients.

> *"Sometimes they come with…vague complaints….because they are insured, they want you to attend to them...even a small cut they want to come so you dress it"* (Health centre In-charge)

Another stereotyping of clients has to do with client's language and religious leaning as mentioned in FGDs with clients. The negative treatment had resulted in grievances being reported to health managers. However reports are mainly made by the privileged in the society and health managers have apologised to such clients.

> *"The client complained of long waiting time and the provider treated her badly... her husband is a health committee member, so he came here to inform me of what happened and we apologised".* (District Director)

The negative treatment by providers has deterred clients from coming to facilities as the quote below indicates:

> *"It has turned some patients away…they refuse to come to hospital when sick, because they are afraid providers will insult them".* (Pharmacist)

Providers however noted the growing assertiveness among some users.

6.2.5 Information factors

Several information factors that affect provision of services were brought up in the IDIs with providers. From IDIs it was evident that both providers and clients are not clear about clients' entitlements under the NHIS.

6.2.5.1 Clarity on policy

The key concern was the delays in reimbursement and hospital administrators are unclear about which office to approach to enquire about their reimbursement.

> *"The reimbursement is our main problem. Sometimes when you ask your district scheme, they tell you the problem is from the region. Then the region also says it is from the national level. We don't know whether the national level has the funds and doesn't release it, or they release it [funds] to the region and the region doesn't release it to the district. We don't know where the problem is coming from."* (Hospital accountant)

As a result of persistent reimbursement delays, some facilities threaten to halt the provision of service to insured clients:

> *"Our creditors want their money but we can't pay them. If it continues, we will be forced to revert to the 'cash and carry' to enable us continue to provide service."* (Hospital accountant)

Providers already have a lot to deal with and therefore when clients burden them with questions about issues that are beyond the mandate of the provider, it irritates providers and they respond harshly. An example is the delay in the issuance of health insurance cards, a responsibility that does not lie with the provider. Without valid insurance ID cards, free service cannot be provided to insured clients.

> *"Sometimes they ask us why their cards delay. You know we are not responsible for providing cards."*(Nurse, health centre)

Furthermore, insured clients are provided with about four health facility attendance cards by their district schemes to use when visiting the health facility for a specified period. On each hospital/clinic visit, an attendance card is taken from the client and forwarded to the NHIS office

for fee claims. When these cards are exhausted, clients ask providers to return their facility attendance card to them to enable them to use the service when they need to, since it is the facility that takes these cards. This again is not in the hands of providers and sometimes creates a misunderstanding between clients and providers.

Clarity on what services are covered is a hindrance to the provision of services. Providers in the IDIs are unwilling to provide some services for fear of not being reimbursed. An example is the need for clarification on whether the NHIS covers post abortion care. Without clarity on these issues, such services may not be provided to those needing it.

6.3 Summary

A major barrier to the use of services is the cost of services. Direct costs of services such as consultations, diagnostics and drugs, as well as transport costs, are often beyond the reach of many poor rural people. Indirect costs of service in terms of travel and waiting time are also inhibiting factors to the use of health care service. Ability to pay for services by rural farmers is dependent on external circumstances such as the weather and a readily available market for their produce. Incomes are not regular and sudden illness can place a financial burden on families.

Coping mechanisms include the use of savings, borrowing or the sale of assets. The repercussions of borrowing can often be devastating. Use of health care is affected when the time of sickness does not coincide with periods when funds are available. Though social networks exist, one's capacity to rally funds quickly can hinder the use of services. In some instances families are forced to borrow from money-lenders and terms of payment can be very harsh, impoverishing already vulnerable families.

This state of affairs does not only apply to those not covered by the NHIS but also for the insured. The reason for this phenomenon is that, even though insured clients are protected from OOP, there still remain hazy areas where both clients and providers are uncertain if the NHIS covers payment for some services. For the uninsured, OOP is a major barrier and although some desire to be NHIS members, the never-ending cycle of poverty makes membership difficult.

Geographical factors, such as the distance between health facilities and communities, are a major access issue and affect both clients and providers. Bad road conditions and unavailability of transport in many rural communities affect the use and provision of health care. Families of sick people may have to hire transport at exorbitant costs in emergency situations.

Policy directives and their implementation determine the range of services offered, drugs and equipment and staff available. Clients are continually faced with referrals and with little funds, many poor families find it difficult to move to these referral points. Unpredictable opening hours and long waiting times are also a barrier to access to health care.

Behavioural and cultural factors are also a major factor in the use of health care services by clients. Staff attitude is an immense deterrent to access to health care for many potential clients. The phenomenon of negative staff attitude has become even more important with the increasing utilization since the introduction of the NHIS. Increasing patient numbers coupled with inadequate staff have led to increases in the workload, and with few incentives, it is difficult for staff to give of their best.

Coburn (2007) emphasized that inequitable health care is as a result of social and class struggles. In general, power relations are imbalanced between providers and clients and this frames the complex interactions between the two. In the main, power relations are tilted in favour of the provider. The feeling of powerlessness by the client in the overall scheme of things at the facility makes health care use difficult for many. The use of power seems a coping mechanism by providers to deal with the challenges of their work.

Informational factors also affect the use and provision of health care services. There were several questions that clients particularly seek answers to. Most of these were around the operation of the NHIS and clients are unaware of what they are entitled to. Providers are often equally uninformed about NHIS entitlements.

From the findings presented, it shows that the community and provider factors that contribute to benefit incidence patterns are multifaceted and interlinked. These must be tackled concurrently

(O'Donnell 2007) to enable a healthy relationship between clients and providers for the provision and use of service across different socio-economic groups. Detailed recommendations on possible interventions to address access barriers are presented in Chapter Eight.

CHAPTER SEVEN

DISCUSSION

7.0 Introduction

The Ghana government introduced reforms within the health sector to achieve universal coverage some years ago. In 2004 the NHIS was introduced, it is appropriate to assess whether the reforms have assisted in progressing towards universal coverage. One key component of universal coverage is ensuring access to needed health care for all. The focus of this research is to assess if access to needed care in Ghana is being achieved.

7.1 Is there universal access to needed care?

The results presented in Chapter 5 clearly demonstrate that health service benefits (both public subsidies and from all health services) in Ghana are not distributed in line with the need for care. The benefits from using ANC and delivery are also inequitably distributed. However, it must be recognised that it is not feasible to achieve universal coverage within a few years. A key question however is whether the distribution of benefits has improved in 2007/2008. Unfortunately, there are no comprehensive BIA results for the period just before the introduction of the NHIS but there is some data on the benefits from public subsidies in the early 1990s from the study conducted by Demery (1995).

Demery's study used the same methodology as the current study. He used GLSS 2 household survey data to estimate utilization of health services by different socio-economic groups. In order to estimate public subsidies, Demery obtained information on recurrent expenditure from the Ministry of Health. In this study, I also used a household survey and had the benefit of MOH recurrent expenditure data. The methodologies are similar and provide a good basis for comparison.

The study shows differences in the distribution of benefits from health care subsidies in 1992 and 2008. Whilst the benefits of the public subsidies for the poorest increased, they have decreased

for richest showing a fairer distribution pattern in public health care subsidies now compared to 1992.

Whilst Demery found that the poorest 20% secured only 10% of the benefits at the primary care level in 1992, the present study found that the benefits of the poorest quintile had increased to 18% at the primary care level. At that service level, in 1992 the richest secured 31% of the benefits as against 22% in the current study.

The public subsidy benefits for inpatient care in Demery's study shows that the poorest quintile's share of benefits was only 13% but this has increased to 15% in the current study, whilst the richest quintile's benefits had decreased by about a half in the current study.

The overall public subsidy benefits in Demery's study were 12% and 33 % among the poorest and richest quintiles respectively, whilst in the current study they are 15% and 23% respectively.

The increased benefits to the poorest and deceased benefits to the richest cannot necessarily be attributed to the NHIS rather this simply indicates that those insured have greater use of health services.

Table 7. 1 Comparison of benefit incidence by Demery (1995) and current study

Primary care	Demery 1995 % benefit by quintiles	Current study % benefit by quintiles
Quintile 1	10	18
Quintile 2	17	19
Quintile 3	19	21
Quintile 4	23	20
Quintile 5	31	22
Hospital outpatient		
Quintile 1	11	14
Quintile 2	14	14
Quintile 3	20	28
Quintile 4	23	18
Quintile 5	32	26
Hospital inpatient		
Quintile 1	13	15
Quintile 2	15	15
Quintile 3	17	27
Quintile 4	19	27
Quintile 5	35	17
Total subsidy		
Quintile 1	12	15
Quintile 2	15	15
Quintile 3	19	27
Quintile 4	21	21
Quintile 5	33	23

Despite the increased benefits to the poor now as compared to the 1992 figures , inequities in the distribution of health service benefits remain. If these inequities are to be addressed in the shortest possible time, we need to address the factors that are impeding access to health care at present.

Chapter 6 highlighted that there is a wide range of access constraints such as the geographical distance between health care facilities and communities coupled with bad roads and inadequate transport. Travelling to health facilities, particularly hospitals, have both direct and indirect cost implications for community members. These constitute barriers to access to those who live

considerable distances away from the nearest hospitals (Heller 1982; Castro-Leal, Dayton et al. 1999; Mensah 2009). These costs may be unaffordable to the poor and other vulnerable groups.

In addition to these, there are also organizational factors regarding staff, equipment and drug availability and problems relating to unpredictable opening hours. Other access barriers have to do with socio-cultural, behavioural and attitudinal factors. Informational factors, particularly relating to the administration and management of the NHIS, also act as barriers to access.

It can seem overwhelming for policy makers when confronted with such a long list of access challenges faced by both communities and providers that need to be addressed. The rest of this chapter tries to distil what are likely to be the most important entry points for addressing access challenges in the current Ghanaian context.

7.2 Improving primary care and district hospital services

There are a number of findings in this study which suggest that a priority intervention to address access constraints is to focus on dramatically improving primary care services, and to a lesser extent district hospital services. For example, the only service that is pro-poor is inpatient care at the district hospital level. Also, primary care services and district hospital outpatient services are at least less pro-rich than outpatient services at higher level hospitals.

One of the greatest access barriers is that of transport to health facilities. Community members repeatedly referred to long distances to facilities, lack of transport and the high cost of transport as barriers to use. Primary health care facilities are the best distributed, followed by district hospitals. These are the services which are located closest to communities.

However, many community members do not feel that primary care facilities provide good quality care. There are drug stock-outs, basic equipment is lacking, there are few skilled staff and they are not seen to be gender-sensitive. Male clients in particular perceive primary health care facilities as designed to serve primarily pregnant women and children and they therefore bypass these facilities to seek care elsewhere.

Organizational factors, for instance the unavailability of equipment and appropriate staff, particularly at the primary care levels and in rural areas, lead to frequent referrals which constitutes a barrier to use (Witter, Arhinful et al. 2007). Chapter 2 highlighted the problem with staff postings to rural communities. In general, many highly qualified staff refuse postings to remote areas of the country (MOH 2009). It is recognized that many health care providers prefer to work in large urban centres than in rural communities (Schofield, Fletcher et al. 2009), creating a concentration of health care providers in urban areas aggravating the wide disparities in health status within a country (WHO 2010).

Unpredictable opening hours, long queues and long waiting hours in health care facilities have been found to also act as access barriers (Gilson 2007; O'Donnell 2007; Peters, Gard et al. 2008; WHO 2008; McIntyre, Thiede et al. 2009; Chuma 2010). These problems exist in many primary health care facilities in Ghana.

Poor staff attitudes has also been found to be disproportionately experienced by the poor (Aitken and Thomas 2004; Freedman, Waldman et al. 2005; Gilson 2007). In many primary care facilities, the problem of poor staff attitudes was frequently mentioned as a barrier to use.

These problems need to be urgently addressed. The majority of the most common illnesses can potentially be treated at the primary care level and good quality services at this level will not only improve geographic access and reduce the burden of transport costs, but will also ensure that the NHIS is sustainable as patients can be treated at lower cost at PHC facilities.

It is important to consider the distribution of PHC facilities and district hospitals to identify where there are gaps, for example, where the geographic distance to a facility is too great for the community and address this.

The CHPS policy is important in providing close-to-client services. It is a key strategy employed by the Ghana Health Services to facilitate access to health care to individuals, households and communities. Therefore, an expansion of the CHPS concept will improve access to basic health services (GHS/PPME 2007). However the expansion of CHPS has been slow.

Although the GHS annual report (2009) cites that although all districts in the country have demarcated their CHPS zones and developed plans to make them functional, these plans have not been implemented in some areas. The delay has been attributed to difficulties in provision of key logistics and as a result, the number of CHPS compounds, are far from reaching the target of 1,706 set for 2015 (GHS/PPME 2007).

Besides, only preventive services provided in the CHPS compounds are free. Clients have to pay out-of-pocket for curative care like in any other public health facility and out-of-pocket payments have been shown to impede health service use. The CHPS policy needs to be revived and efforts made to provide logistics for its implementation.

There is also a need to improve the availability of essential equipment at all PHC facilities; this may involve carrying out an audit of equipment in all PHC facilities and getting all up to acceptable standard in terms of availability. Procedures for routine maintenance of equipment must also be established.

Further, an improvement in the routine availability of drugs is required. It is essential to explore the cause of drug shortages in primary health care facilities. For instance, it is worthwhile to investigate whether the problem is in ordering replacement drugs, drug procurement, drug distribution or if there is drug pilfering from the facility and address these root causes.

Improving staffing of primary facilities and ensuring the availability of sufficient skilled staff and the right skills mix is key in making PHC facilities available to the communities they serve.

Efforts need to be made to restore communities' confidence in primary care services. The above interventions will help, but it is also important to address the issue of men not believing these facilities can deal with their health problems. There is also the need to actively engage with communities to see what interventions could change their negative perceptions about health facilities in their communities.

While it is critical to dramatically improve PHC services, there are occasions on which the PHC facility cannot deal with certain health problems. Attention needs to be paid to how to improve access to referral services. This may include providing patient transport on referral, certainly in the case of emergencies.

7.3 Expanding insurance coverage

The results in Chapter 5 clearly demonstrate that membership of the NHIS is an enabling factor in benefiting from the use of health services. The insured gained almost five times more in monetary terms from using public health care services than those without such financial protection (see Table 5.13) and they use health facilities three times more than the uninsured (see Table 5.14). Other studies of the NHIS have similar findings. For example Mensah's (2009) study found that Ghanaians enrolled in the NHIS are more likely to use public health care services, both outpatient and inpatient health care services, than those not enrolled. This is to be expected as the NHIS provides financial protection or reduces the cost of using health care services at the time of need.

However, the findings presented in Chapter 6 clearly show that many people cannot afford the NHIS membership premiums (Sulzbach, Garshong et al. 2005; Mensah 2009; Witter 2009; Akazili 2010) and that higher income groups are more likely to be covered by the NHIS than lower income group (see Table 5.15). Though the Ghana NHIS is described as a *mandatory* scheme, it is not mandatory in reality for those in the informal sector. Many Ghanaians in the informal sector are not covered; they have to pay a premium and registration fee to become members and to use services without paying fees at the point of care. There is an urgent need to address the issue of how to cover those in the informal sector. The government of Ghana has chosen to achieve universal coverage through the NHIS and must therefore explore ways in which it can achieve this. One strategy currently under consideration is that all those outside the formal sector will only have to make a one-time payment in order to be members of the NHIS (Witter 2009; NHIS 2010; WHO/TDR 2010). While the precise nature of the one-time payment policy remains unclear, it suggests that most of the health care requirements of those in the informal sector will be tax-funded.

It must however be mentioned that the introduction of the NHIS is in some ways increasing barriers to health care access. There have been substantial increases in utilisation (see Figure 2.8) since the introduction of the NHIS without associated increases in staffing levels. Thus, workload has increased for staff and this has exacerbated poor staff attitudes, which itself creates a barrier to service access. Those who are not members of the NHIS not only face these barriers but also have to pay out-of-pocket for care**.** Although the qualitative data indicated that the insured may bear the burden of poor staff attitudes directly related to their insurance status, the uninsured also face poor staff attitudes because of the high workloads that staff have.

The continued negative access experiences among clients since the introduction and expansion of the NHIS highlights that it is not enough to seek to expand insurance coverage. Indeed, access constraints can themselves constrain insurance coverage as access is an important factor influencing the decision of those in the informal sector to enrol. Location of facilities for example, is a key factor. It is obvious that access to health facilities, particularly for people living in rural areas, is a challenge and can deter enrolment by people living in these areas (Witter 2009). Availability of a health facility in a community has been linked with the likelihood of enrolment in an insurance scheme (Mensah 2009). These findings show that decision to enrol in the scheme is dependent on several other factors apart from the ability-to-pay for premiums. It is also noteworthy that during the data collection period, finding insured households became increasingly difficult the further away one moves from the district's health facilities, which tend to be located in the district capitals and bigger towns rather than in the hard-to-reach areas. Conversely, it was easier to locate insured households with closer proximity to health facilities and in urban communities. This phenomenon points to the fact that households further away from health facilities are less likely to enrol because of difficulty in reaching and using the facility.

The phenomenon of the lower likelihood of enrolment among people living farther away from health facilities is not only true in Ghana's case. In the Democratic Republic of Congo (DRC) (formerly Zaire), Shepherd and Vian (1995) found that there was a decrease in enrolment in the Bwamanda scheme the further away a community is located from a health facility.

This highlights that a focus on the funding side of universal coverage is not enough. Providing a mechanism for insurance cover is only part of the solution (Stuckler, Feigl et al. 2010). It is therefore crucial that other access constraints that persist despite providing financial protection be taken seriously and addressed (Meesen, Van Damme et al. 2006; Ir and Bigdeli 2009; McIntyre, Thiede et al. 2009).

7.4 Improving staffing levels and their distribution

Health human resources have been an ongoing concern for Ghana (See Chapter 2). Many trained doctors and nurses have left the shores of Ghana to seek 'greener pastures', especially in America and European countries. Though the 'brain drain' has stabilized, the health workforce still remains inadequate (MOH 2010) and attracting and retaining staff in rural areas remain a challenge to the health sector (MOH 2009). Generally there are inequities in the distribution of health service providers across the country (MOH 2009), with the most highly trained professionals being located in the urban areas and less trained health personnel mainly in rural areas (Boom, Nsowah-Nuamah et al. 2004; MOH/GHS 2007). Staff numbers are inadequate at all levels but are worse at the peripheral levels.

Training more health staff, a more equitable distribution of staff and the reorientation of health workers to work in rural areas where their services are needed most are vital. Exploring ways of motivating health workers and creating avenues for the development of staff in hard-to-reach areas must be taken seriously.

7.5 Addressing informational barriers

The three key interventions highlighted above i.e. improving primary care and district hospital level services, expanding insurance coverage and improving staffing levels and their distribution all require substantial interventions that are difficult to implement and where considerable time will elapse before their effects are felt.

There are however some interventions that can make an immediate difference and are not costly to implement, particularly in relation to improving information. For instance many Ghanaians are unaware of the premium exemptions provision for the poor under the NHIS. Besides, there is

lack of awareness of the Essential Drug List (EDL) under the insurance scheme and which prescribed drugs do not require payment by insured clients and which require payment.

Furthermore, reasons for delay in the issuance of insurance cards are not known to clients and the very essence of insurance and the need to pay premiums annually regardless of whether one uses the service or not in the previous year is not well understood by some sections of the population. The general population should also be educated that drugs (particularly generic drugs) provided to clients, whether insured or not, are of good quality. Also education is required on what services are offered for free for those with insurance cover and those services that require payments. Providing information on these issues will increase confidence in the NHIS.

From the perspective of providers, the reasons for the persistent delays in the reimbursement of NHIS claims to facilities must be made clear and efforts made to speed up reimbursements to health care facilities.

7.6 Summary

There have been some improvements in the distribution of benefits from using health care since the early 1990s, as the results of the current study demonstrate. However, it is critical that greater emphasis is placed on addressing the full range of access constraints by improving PHC and district level health care services, expanding insurance coverage, improving staffing levels and distribution and addressing informational barriers.

Addressing these access constraints cannot be achieved overnight. However, the distribution of benefits from using health services will continue to be inequitable until action is taken to reduce access barriers.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

8.0 Introduction

This chapter brings together the key findings of the study in relation to the main and specific objectives set in the study. It highlights the new contributions of the study and provides recommendations for policy and areas for further research.

8.1 Revisiting the research objectives

The study set out to measure the benefit incidence of health service use in Ghana and to assess if benefits are distributed according to need. It measured the distribution of both public and private health care benefits. It also sought to assess the use of two maternal health care services across socio-economic groups. Further it sought to explore the community and service factors that facilitate or impede access to health care services in the country.

8.2 Inequitable distribution of health care benefits

The benefits from using health services in Ghana are not distributed in line with the need for health care. All services, except public sector district hospital inpatient care, are pro-rich. Benefits from using both public and private health care services are pro-rich.

Public sector primary health care and district hospital outpatient care are the least pro-rich. Generally, the share of benefits relative to the share of need for the poorest and richest quintiles show the inequitable nature of the benefits of using health care in the country.

The qualitative study findings point to several access factors which influence the benefit incidence patterns we find in Ghana. These include issues such as cost of health care, ability-to-pay for health care services, long distances between health facilities and communities, and organisational factors regarding staff availability and mix, equipment availability and opening

hours. Behavioural and attitudinal and informational factors also act as barriers to accessing health care services.

Yet very often, the focus in major health financing reforms, such as the introduction of the NHIS in Ghana, is on providing financial protection. Little or no attention is paid to actively addressing the full range of access constraints that face communities. If the NHIS is to achieve its goal of promoting universal coverage, attention must be paid to mechanisms to address these access constraints.

The analysis of access constraints in this study suggests that there are four major areas for intervention. These are improving primary care and district hospital services, expanding insurance coverage, improving staffing levels and their distribution, and addressing informational barriers.

Improving primary care and district hospital services is important as this will benefit the lowest income groups most, given that these are the levels where the rich-poor differences are lowest. They are the service levels that many community members are able to reach. Most of the common health problems can be addressed at this level, and if services of good quality are provided, the need for costly referrals will be minimized. However, in Ghana services at clinics and health centres attract fees and even the lowest public health care level, the CHPS compounds; continue to charge fees for curative services. This implies that those without insurance cover in rural and hard-to-reach areas pay out-of-pocket. This means that even such a laudable close-to-client service such as the CHPS is not necessarily affordable for those without insurance cover.

Secondly, an expansion of insurance coverage will afford many more Ghanaians the opportunity to use services at all levels of the health system. The study clearly demonstrated that having insurance cover facilitates the use of health care services. Insured Ghanaians for instance used health care services three times more than the uninsured. Therefore expansion of insurance coverage is a step in the right direction. However, unaffordable premiums and registration fees are cited as important reasons for non-membership by many in the informal sector in several

studies in Ghana (Sulzbach, Garshong et al. 2005; Mensah 2009; Witter 2009; Akazili 2010). Apart from the affordability issue, the interrelationship between other access factors and NHIS membership for the informal sector is important in the decision to enrol, as noted in Chapter 7. An example of which is the need to improve attitudes of staff to improve the relationship between providers staff and insured clients.

Improving staffing levels and their distribution is important particularly in primary health care facilities and district hospitals. Insufficient staff numbers coupled with poor staff mix results in frequent referrals to higher level facilities mostly located in urban areas which are difficult and expensive for many to reach. The introduction of the NHIS has resulted in increased utilization and the workload of staff. This needs to be addressed if universal access to needed care is to be achieved.

Further, is the need to address informational barriers to promote awareness among both providers and community members on the operation of the NHIS. For example community education is required on the exemptions policy, the basic mechanisms of insurance, issuance of insurance identity cards and what services and drugs are covered and what are not. Conversely improving provider's clarity on the services covered and the cause for reimbursement delays could allay provider fears about reimbursement if they provide certain services. Education on the efficacy and quality of drugs on the essential drug list will also prevent negative perceptions among providers and the general public alike that NHIS members are supplied with poor quality drugs.

Recommendations on how to address these, and related issues, are outlined in some detail below.

8.3 Recommendations

8.3.1 Improve primary care facilities

The study has demonstrated that the poorest population groups largely access care at the primary health care level and in district hospitals. It is therefore recommended that more investment is directed to improve the quality of primary health care and that user fees be removed at all primary level facilities such as clinics, health centres and CHPS compounds. It is important to

consider the distribution of PHC facilities and district hospitals to identify where there are geographic access problems for certain communities and to prioritize building new facilities in these areas. There are a number of other specific interventions that should be taken to improve access to and the quality of primary care services.

8.3.1.1 Expansion of CHPS

The intention of the MOH/GHS to expand CHPS has not materialised; therefore efforts should be made to realise the full potential of the CHPS strategy. The CHPS policy is important in providing close-to-client services, but so far many communities do not have functioning CHPS for various reasons. Although the number of CHPS zones have more than doubled between 2008 and 2009 (GHS 2009) this is not enough. The key hindrance has been the lack of logistics. Therefore, it is recommended that the pace at which CHPS zones are made functional needs to be increased and more Community Health Officers (CHOs) deployed.

8.3.1.2 Improve the availability of drugs and equipment

Community members mentioned the unavailability of equipment in many PHC facilities. There is a need to improve the availability of essential equipment at all PHC facilities. This may require an audit of equipment in all PHC facilities and ensuring that each facility has all equipment available. The routine maintenance of equipment is also urgently needed to ensure good quality primary health care in the longer term.

In addition, improvement in the routine availability of all essential drugs, particularly in primary care facilities, is crucial. It is also necessary to critically explore what the problems with regards to drug availability are. It is worthwhile examining whether the current drug stock-outs is due to problems with ordering replacement drugs, drug procurement problems and/or 'leakage' of drugs from the facility and then addressing the observed challenges.

8.3.1.3 Restore confidence in PHC facilities

In general, many Ghanaians appear to have lost confidence in PHC facilities. As a result, they bypass them to seek care in higher level facilities and this has repercussions for the cost of care. Efforts need to be made to restore communities' confidence in primary care services. In

particular, there is a need to address the issue of men's perception that primary care facilities are unable to deal with their health problems. Additionally, it is essential actively to engage with communities to see what interventions could change current negative perceptions about primary health care facilities.

Furthermore, the tendency for staff to neglect clients while they engage in personal activities than provide health care must be addressed. There is a need for dialogue with staff on the importance of their availability at all times to provide services to their clients with dignity and respect. There should also be engagement with staff regarding negative attitudes and poor treatment of clients. While it is not a simple matter to change staff attitudes, these less 'tangible' barriers to health service access also need to be addressed.

8.3.2 Deal with geographical barriers

Other areas that clearly affect health care delivery and the ability of communities to use health services, even at the primary health care and district hospital level, are a good road network and a reliable transport system in rural areas. A good road network will bring providers and clients together and make the delivery and use of health service easier for those who live in rural areas. However, the construction of roads is not within the jurisdiction of the Ministry of Health. Nevertheless, highlighting the problem will make visible the role other sectors can play in making health care accessible.

Even if geographic access to and the quality of care at primary health care facilities is improved, patients will sometimes require referral to higher level facilities. Transport to referral facilities, particularly the cost of such transport, was identified as a major access barrier in this study. Therefore, it is recommended that serious consideration be given to the provision of transport to convey clients to referral facilities, as an important step towards reducing geographical and economic barriers. In the interim, engagement with local transport unions such as the Ghana Private Road Transport Union (GPRTU) on an arrangement for the prompt provision of transport to covey clients to referral facilities, particularly in the case of medical emergencies, needs to be explored.

8.3.3 Improve staffing levels and their distribution

The human resource challenge in Ghana is admittedly immense; yet greater priority has to be given to addressing this challenge in order to deliver services. Clients report frequent referrals from peripheral facilities due to lack of requisite staff there to bigger facilities. It is recommended therefore that staffing at all levels is improved, particularly at primary level care and district hospitals. Staff at these levels should be of high quality and of the appropriate mix to ensure effective service provision and minimise referrals.

Training more heath care providers is important given the increase in utilization after the introduction of the NHIS, which exceeded growth in staff numbers. Further, staff training should be geared toward a reorientation of health workers to work in rural areas where their services are needed most. The equitable distribution of existing health staff should also be made a priority. The present situation where skilled health staff are concentrated in urban areas should change. It is, therefore, recommended that financial motivation and avenues for the development of staff in hard-to-reach areas are taken seriously to encourage health staff to work and remain in rural areas. Making it obligatory to serve in rural areas on a rotational basis and arrangement for skilled staff to provide service at regular intervals in smaller facilities is also an option.

8.3.4 Expand insurance coverage

To achieve universal coverage, efforts must be made to expand coverage of the NHIS. At the moment, many Ghanaians are excluded and these are mainly those in the informal sector who have to pay for registration and annual premiums to be able to access services. The government of Ghana's promise to stop yearly premiums and institute a one-time payment is a step in the right direction; it could address the exclusion of the informal sector given the difficulty faced by this segment of the population in making annual premium payments. However, recognition of the likely rapid increase in utilization when financial protection is improved must be borne in mind and its potential repercussions on service quality if appropriate measures are not put in place.

8.3.5 Address informational factors

Providing information on the NHIS is important for both staff and the community. Creating awareness among the population on the core foundations of the NHIS and the availability of exemptions for the poor is necessary. Another recommended intervention is the education of the population on the administration and issuance of identity cards, about why some insured clients pay for some services and some drugs, and the assurance by the health ministry that the quality of drugs prescribed to those with insurance cover and those without are of equally good quality.

Providers in particular need to be informed by the district insurance schemes about the reasons for the delays in reimbursement of NHIS claims to their facilities. Clarity on which services are provided for free for insured clients is also necessary to reduce conflict and mistrust between clients and providers. Providers also need to be educated about the need for and benefits of the Essential Drug List (EDL) and given the assurance that such drugs are of good quality.

8.3.6 Prompt reimbursement of health facilities

Prompt reimbursement from district insurance schemes should be made a priority, given that the frequent delays in reimbursement adversely affect service provision. Already some facilities have threatened to cease providing service to insured clients. As indicated above, health facility managers should be informed about the reasons for delays because the lack of feedback from the appropriate authorities leads to suspicion and mistrust, which affects service provision in general.

8.3.7 Concurrent implementation of recommendations

While the recommendations put forward cover a range of initiatives, it is important that one intervention is not given such priority that the others are neglected. It is important that these areas are tackled concurrently; the concept of access is multidimensional and addressing access barriers requires a multi-pronged approach. It is inappropriate to solve one problem only for other problems to rear their heads. This has already occurred; for instance improved financial protection has considerably increased utilization, which has translated into providers complaining about their workload and clients complaining about service quality. The recent experience with the introduction of the NHIS serves as a caution to policy makers.

Many of the above recommendations call for improvements in various aspects of health service delivery. Improvement of services in one part of the health sector may have an opportunity cost if overall health system financing is not increasing at the same time. It would therefore be necessary to assess where efficiency gains can be achieved.

8.4 Areas for further research

- There is a need to undertake research into the main reasons for the frequent drug stock-outs experienced in many facilities in Ghana. The routine availability of drugs at health facilities, particularly at primary care facilities, is critical to improving access to health services.

- Studies in how to improve staff attitudes are urgently needed to reduce the problem or prevent it altogether. There is a long-standing problem in this regard that adversely affects perceptions of health services thus making it a barrier to use, particularly for vulnerable groups, and it cannot be left unattended to. Studies should draw on the literature on inter-personal relations, communication skills and human resource management.

- Kruk (2010), citing Wilson et al. (2009), highlighted that little research has been conducted on effective strategies to promote rural practice, particularly in low-income countries. In order to ensure universal access, it is without doubt that Ghana needs to increase its stock of human resources for health and to retain staff, especially in rural areas. Studies are, therefore, needed to assist in coming up with feasible solutions to this challenge within the Ghanaian context. It is reported that coercive strategies, such as those being pursued in Ghana where staff who refuse a posting are "threatened with salary blockages" (MOH 2009:32), can only address shorter term recruitment needs (Wilson, Couper et al. 2009). Studies on strategies to recruit and retain health staff on a long-term basis in rural areas are, therefore, urgently needed.

- It is recommended that benefit incidence studies are carried out intermittently to monitor progress towards the equitable distribution of health care benefits across population groups. Ghana already carries out the Ghana Living Standards Survey (GLSS) periodically. Inclusion of key questions in the GLSS that will allow for the efficient and comprehensive

measurement of health care benefits and need are critical to routine monitoring of benefit incidence.

8.5 New contribution

Despite the limitations highlighted in Chapter Four, this is the first study in Ghana to:

- Quantify comprehensive patterns of benefit incidence from the use of health services in Ghana (i.e. not only the distribution of public subsidies but also of public and private sectors combined).

- Compare the distribution of benefits from using health services with the distribution of health needs across socio-economic groups. Although the internationally accepted definition of equity is that individuals should benefit according to need, no previous studies of benefit incidence have compared the distribution of benefits with the distribution of need. Instead, previous BIA studies have simply compared the share of benefits across quintiles and implicitly assumed that the share of each quintile should be 20% (i.e. the share of benefits should be in line with their population share, rather than their share of need).

- Although some of the previous BIA studies have hypothesised about the factors that have contributed to the inequitable distribution of benefits, no previous study has explored in detail the facilitating and constraining access factors that influence benefit incidence patterns. It is not enough to inform policy makers that benefits from using health services are inequitably distributed; one also needs to identify the community level and service delivery factors that either facilitate or impede access so that specific policy interventions can be identified and implemented to address access constraints and enhance access facilitating factors.

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Appendices

Appendix 1:Summaries of some benefit incidence studies

Country	Type of public spending	Key findings	Author(s)
Ghana	Education Health	On the whole, benefit incidence for health and education did not favour the poor. Whilst the poorest 20% received 17% of spending in education it had only 12% for health in 1992. The poor gained relatively more from primary education (22%) but gained less for secondary education (15%) and even less from tertiary education (6%). On average, there were marked gender inequalities. Whilst boys received a subsidy almost □13,000 girls had a little over □8,000. On health, urban areas got 48% of health spending though they form only 32% of the total population. On average, urban residents received a subsidy of almost □6000 as compared with their rural counterparts who received □3000. Females got a greater share of health spending (56%) but this was not true for all income groups since the poorest gained much less. Surprisingly lower income groups tended to gain much from inpatient care. The findings show inequalities in health regionally. Accra is better served than other parts of Ghana. If the poor and rural communities are to benefit from government spending and subsequently the totality of the human capital of Ghana then efforts must be made in making sure that services reach every part of the country especially rural and poor communities. The study suggests policy reforms in both health and education	World Bank (Demery, Chao et al. 1995)
India Bangladesh	Health	In India, Kerala targeted public spending to the poorer groups and even for hospital care. Public spending in Orissa accrued mainly to the rich. Uttar Pradesh spending was poorly targeted as well. Looking at equity in access in Kerala access was also equitable. The poor used as many services as the rich. In Orissa the richest 20% use less than half as many hospital services as the poorest 20% in Kerala. In general public expenditure is more equitably allocated in urban areas than in rural areas. Subsidies in urban areas are well targeted,	DFID (Pearson 2002)

		with the poorest 20% using over 20% of the subsidies. Subsidies in the rural areas are poorly targeted with the richest 20% using over a third of public subsidies. In Bangladesh, generally the richest tend to receive more subsidies from all categories of hospitals for in patient care. For out patient care, the subsidy per capita for the richest is much higher. In addition subsidies are concentrated in the hospital sectors than at the periphery. Generally in rural areas the richest 20% gained 34% whilst the poor gained 15%. Overall public expenditure is more equitably distributed in urban areas than in rural areas. In urban areas the poorest 20% got more than 20% of the subsidies. However subsidies in rural areas are poorly targeted. Here the richest gained more than a third of public subsidies. With regards to gender, women tend to get relatively more of the benefits in all facilities in urban areas.	
South Africa	Health	Generally public spending benefited high income groups. .Public health spending is concentrated in higher levels of care such as acute hospitals. Academic and tertiary hospitals take almost half of all public health spending and this can be a source of inefficiency. Poor provinces especially those with large proportions of the population coming from mainly black communities lack affordable health care. These mainly black communities receive less than average public health resources per capita per visit. The very poor in South Africa receive a smaller share of public spending than their share of the population. They form 29% of the population however they receive only 27% of health resources. Additionally about 20% of the health resources leaks towards the richest and second richest income quintiles, though they have access to private health care and likely belong to a health insurance scheme. The majority (72%) of the poorest quintile reported they sought no care because treatment was too expensive as compared to 9% of those in the richest quintile. The study showed that the poor provinces lack public health resources despite their populations suffering poor health. These findings demonstrate gross inequities in the South African	(Castro-Leal 1996) World Bank National treasury USAID

		health system.	
Bangladesh China Hong Kong India Indonesia Malaysia Nepal Sri Lanka Thailand Vietnam	Health	Hong Kong's public subsidies are more pro-poor than the rest of the countries. The poorest fifth consumes more than one fifth of all types of services in Hong Kong. Public health services are pro- poor in Malaysia and Thailand and evenly distributed in Sri Lanka. In the rest of the low income territories the richest received more of the subsidies than the poor. In Nepal, Heilongjiang (China), Indonesia then Ghansu (China), Bangladesh and Vietnam public health spending is more pro rich. Most of public health spending goes into hospital inpatient care than hospital out patient care. Non hospital care is pro-poor in most of the territories however; the bulk of the subsidy goes into hospital care. Hospital care is pro-rich. In all the territories with the exception of Vietnam the richest 20% get more than 30% of all in patient care and these reflect urban- rural disparities. The poor live in the countryside whilst hospitals are concentrated in the cities. It only in Nepal that the poorest 20% receive less than a fifth of public health care delivered outside hospitals. The analysis discloses the wide variation across the different Asian countries. Malaysia, Sri Lanka and Thailand are doing well than their neighbours. The study concludes that the extent of public subsidy to the poor depends on user charging policy. These three countries either charge very low fees or services are free in public health facilities, though family planning services are not free in Sri Lanka. For the rest of the countries there are user charges and in cases where they are provided free there is some charge at the point of care. Service factors contribute to use of service generally. In India free medicines are often in short supply and had to pay for these out of pocket, procedures for exemptions for the poor are not available and cumbersome.	EQUITAP 2005
Ghana Cote d'Ivoire Guinea Madagascar South Africa Tanzania	Health	Illness is less reported by the poor than the rich. The BI of public spending favours the richest in all countries for both primary and hospital care, with the poorest receiving 4-17% of their share and the richest receiving 17-48% of their share. The poor are more inclined to self treat than the rich. Richest groups rely heavily on publicly provided care with the exception of South Africa where the rich opt for	Castro-Leal,Dayton J, Demery L, Mehra K, (2000)

		private hospital care. The poor rely mainly on the public system but private care is important for both the poor and the non poor in Ghana, South Africa ad Tanzania. There is little reliance on traditional health providers with the exception of Guinea. The study indicated both service and community factors that can affect use of service. It suggests changes in household behaviour and raised questions about the understanding of poorer households on the need for treatment on time. It mentions the need for the improvements in quality and access to health care since the poor are sensitive to poor quality and access. It suggests a well designed user fee policy but then care must be taken in such decisions especially for services that are mainly used by the poor. It concludes that reallocation of resources will not solve the problem of poor benefit incidence to the poor, rather it calls for a "sound understanding of the factors that govern household decisions about health care and of the means by which subsidized services can lead to better outcomes for the poor"(2000:72)	
Pakistan	Education	Looks at government spending in four provinces in Pakistan. Public subsidies for primary education are pro poor. The poorest 25% got more than 35% of the subsidy in two of the provinces. In one of the provinces, the main beneficiaries of public spending on primary education were the middle income class. Spending for higher education is poorly targeted to poor households. They favour the better off. Government spending in secondary education present a mixed picture. It was pro-poor in one, pro rich in another province and equitable in two provinces. For tertiary and professional education the poor got far less than their share whilst the rich got more than double their share.	Muhammed Sabir 2003
Cote d'Ivoire	Education	The subsidy per student in private and public schools increases at higher quintiles. Students from families in the highest quintiles receive more than double that which is received by students from poorer quintiles. In the case of public school, students from families in the highest quintiles receive four times more than those in the lower quintile. For students attending private schools the subsidy per student increases but this increase is less pronounced. Students from families in the highest	Sakellariou Patrinos 2004

		expenditure quintile receive about twice the subsidy received by students from the lower quintile families.	
India	Health	Public subsidies are poorly targeted to the poor especially those living in rural areas and poorer states. The distribution of public subsidies for primary care and MCH services are targeted more effectively than curative care. Poorer patients and poorer states use more of publicly provided hospital care than private hospital services compared with their richer counterparts Distance disproportionately affect utilization of poorer people in India. The study concluded that what drives benefits is the magnitude of subsidies and utilization patterns. It also suggested that the observation that poorer patients and poorer states used more of publicly provided hospital care than private hospital care was that poorer patients were insured against expensive illness episodes than their well off counterparts. Though insurance coverage for the poor is greater, still large amounts go to the rich especially those in rural areas confirming that distance affected the poor than the rich.	Mahal Ajay 2003
Indonesia	Education and Health	In the education sector, the findings show the same trend in other benefit incidence studies. Public spending on primary education and primary health care are pro-poor. However the subsidies are so small that the poor still have to pay significant amounts. In the case of junior secondary schooling the per capita transfer share is highest among the third and fourth quintiles. For senior secondary schools, the beneficiaries are those in the top two quintiles. Generally the poor are not the main beneficiaries of public education spending. In the health sector, public spending on hospitals and tertiary care are not pro poor however, that of primary levels are pro poor. Overall government spending in education are much higher than that for health.	Lanjaouw et al 2001 World Bank
Ethiopia	Education	Benefits from public investments in primary-level education went to the better-off. This is attributed to low access. The better off have better access to education as compared to the poor. Access rates along gender lines shows that both girls and boys from all income levels seem to get the same subsidy. The poor in rural areas are less likely to	Seifu 2002

		have access to have access to formal education than those in the urban areas. Generally fiscal policy has not been pro poor in terms of spending on education.	
South Africa	Health	Assessed benefit from both the public and private sectors. Benefits from public health primary health services were pro poor while those from central/provincial and tertiary hospitals were pro rich. Privately provided health care were highly pro rich. Distribution of health care services overall was pro rich and not distributed according to need	McIntyre and Ataguba 2010

Appendix 2: Facilities included in the costing of public health facilities

Teaching, regional, district hospitals, clinics and health centres included in the estimating the unit cost of care.

Teaching and regional hospitals included in the unit cost estimates

Teaching Hospitals	Korle Bu
	Komfo Anokye
Regional Hospitals	Eastern
	Greater Accra
	Upper West
	Upper East
	Western

District hospitals included in the unit cost estimates

Ashanti Region	**Eastern Region**
1. Nkenkasu District Hospital	1. Tetteh Quarshie Memorial Hospital
2. Nkawie District Hospital	2. New Tafo Hospital
3. Manhyia Hospital	3. Kibi Hospital
4. Mampong General Hospital	4. Atibie Hospital
5. MCH Hospital	5. Akuse Hospital
6. Mankranso Hospital	6. Atua Hospital
7. Effiduase District Hospital	7. Suhum Hospital
8. Nyinahini District Hospital	8. Asamankese Hospital
9. Bekwai District Hospital	9. Akim Oda Hospital
10. Tepa District Hospital	10. Begoro Hospital
11. Juaben District Hospital	**Northern Region**
12. Konongo District Hospital	1. Yendi Hospital
13. Kumasi South Hospital	2. West Hospital
14. Suntreso Hospital	3. Savelugu Hospital
Brong Ahafo Region	4. Bimbillah Hospital
1. Atebubu Hospital	**Upper East Region**
2. Bechem Hospital.	1. Navrongo Hospital
3. Kintampo Hospital.	2. Sandema Hospital
4. Goaso Hospital.	3. Zebilla District Hospital
5. Sampa Hosptal.	4. Bongo District Hospital
6. Sunyani Municipal Hospital.	**Western Region**
Central Region	1. Bibiani Hospital
1. Winneba Hospital	2. Prestea Hospital
2. Saltpond Hospital	3. Enchi Hospital
3. Swedru Hospital	4. Half Assini Hospital
4. Cape Coast Dist. Hosp.	5. Sefwi Wiawso Hospital
Gt. Accra Region	6. Tarkwa Hospital
1. Achimota Hospital	7. Wassa Akropong Hospital

2. Princess Marie Louise Hospital	**Volta Region**
3. Tema General Hospital	1. Adidome Hospital
4. Ada Dist. Hospital	2. Keta Hospital
5. La Polyclinic	3. Peki Hospital
Upper West Region	4. Nkwanta Hospital
1. Lawra Govt Hospital	5. Jasikan Hospital
2. Tumu Govt Hospital	

Sub district groups included in the unit cost estimates for health centres and clinics in Ghana

Ashanti Region	**Northern Region**
1. Kwabre Sekyere	1. Bole
2. Afigya Sekyere	2. East Gonja
3. Amansie West	3. East Mamprusi
4. Ahafo Ano South	4. Zabzugu/Tatale
5. Asante-Akim North	**Upper East Region**
6. Ejisu-Juaben	1. Bolgatanga
7. Ejura Sekyedomase	2. Kassena Nankana
8. Sekyere East	3. Builsa
9. Sekyere West	4. Bawku West
10. Adansi North	5. Bongo
Central region	**Upper West Region**
1. Ewutu Efutu Senya	1. Wa
2. Mfantsiman	2. Jirapa
3. Agona	3. Lawra
4. Ajumako Enyan Esiam	4. Sissala East
5. Assin	**Western Region**
6. Gomoa	1. Ahanta West
7. KEEA	2. Amenfi West
8. Asikuma Odoben Brakwa	3. Nzema East
9. Abura Asebu Kwaman	4. Bibiani/Anhw/Bek
10. Assin south	5. Mpohor Wasa
Eastern Region	6. Aowin Suaman
1. Afram Plains	7. Sefwi Wiawso
2. Birim South	8. Wassa West
3. East Akim	**Greater Accra**
4. Fanteakwa	1. Tema
5. Suhum Kraboa Coaltar	2. Dangbe East
6. West Akim	3. Ga
7. Yilo Krobo	4. Dangbe
Volta Region	5. Ga East
1. Keta	**Brong Ahafo**
2. Kadjebi	1. Berekum
3. Jasikan	

Appendix 3:Household questionnaire

Start time				

HOUSEHOLD LEVEL QUESTIONNAIRE 2008
STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)
Health Care Financing and Benefit incidence study in Ghana

INTRODUCTION AND INFORMED CONSENT

Hello. My name is [ ]. I work for the Health Research Unit of the Ghana Health Service, and we are conducting a study about health care payment and benefits in your district. The purpose of the study is to learn how issues of health care payment and benefits affect people at the household level. The study will also be looking at the factors that affect health care payments and benefits. Critical broad questions that will be asked include who pays for health care and who benefits. As part of the questionnaire, I will be asking about all the people who reside in your household, and whether or not they have been ill in the past four weeks, and whether they have given birth or have been hospitalized in the past year. For those family members who have been ill or hospitalized or given birth, I would then like to ask some additional questions about their experience(s) receiving health care services. Issues that would be discussed with you include socio-economic and demographic characteristics, health seeking behaviour and health care payments and benefits, health insurance enrolment, household characteristics, household consumption and expenditure, and household assets. I would like to assure you that your responses will be confidential, and will only be used for the purposes of this study. You will not be penalized or lose your health insurance membership if you decide not to participate in this survey. You have the right to refuse to answer any question, and you can terminate the interview at any time. This survey is voluntary, and will take approximately 45 minutes to complete. If you have any questions or concerns about this study, you may contact the following: **Prof. John Gyapong, Bertha Garshong or James Akazili** on 021-681109

Do you agree to participate in this survey? Yes……..1 (continue), No……2 (end interview)

SECTION 1: IDENTIFICATION

H 1.1	FORM NUMBER							
H 1.2	RESPONDENT (HOUSEHOLD HEAD=1, SPOUSE= 2, OTHER ADULT=3)	1	2	3				
H 1.3	SEX OF RESPONDENT	MALE….1			FEMALE…….2			
H 1.4	HOUSEHOLD LOCATION RURAL/URBAN	RURAL...1			URBAN……..….2			
H 1.5	NUMBER OF HOUSEHOLDS IN THE HOUSE							
H 1.6	HOUSE ADDRESS/NUMBER							
H 1.7	NAME OF COMMUNITY/VILLAGE/TOWN							

H 1.8	REGION	UPPER WEST……1 NORTHERN…….. 2 BRONG AHAFO…….3 ASHANTI……4 GREATER ACCRA……5					
H 1.9	DISTRICT	LAWRA……..1 WEST GONJA……2 BEREKUM…….3 ATWIMA NWABIAGYA……....4 KPESHIE……....5 DANGME WEST……...6					
H 1.10	DATE OF INTERVIEW (DD/MM/YY)						
H 1.11	ENUMERATOR'S NAME/ INITIALS						
H 1.12	RESULT OF INTERVIEW, COMPLETE					1	
	OTHER(SPECIFY)_____					2	
H 1.13	EDITED BY SUPERVISOR (NAME) NAME_____DATE _____/_____/_____						
H 1.14	Is this household insured (**either spouse has a valid DHIS card**)				Yes…..1	No…….2	

SECTION 2: HOUSEHOLD ROSTER

I would like to ask you about all the people who live in this household (i.e. those who share meals and living arrangements in this household), starting from the head of household (the people I am asking about are those currently living here or have been absent for less than 3 months**) (Table 1)**

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth (Screening for module 3)***
	First Name	HH head…..…1 Spouse……….2 Child……….3 Grandchild…...4 Other relative…5 Domestic wker..6 Friend……7 In-law..……..8 Other……...…96	*How old is this person in completed years?*	*Male……...1* Female…….2	Married……..1 Never married…….2 Divorced……3 Windowed…..4 Separated…..5 Living together……6 Child……..7 Other……...96	None…..... ...1 Child……2 Pre-primary...3 Primary..... .....4 Middle/JSS…5 Tech/voc…...6 Secondary…7 Tertiary……8	Employed (Full time)……..1 Self employed...2 Casual……..…...3 Unemployed…..4 Pensioner……...5 Student/learner..6 Child ……7 Apprentice ……8 Other…….. 96	*Registered for DHIS……1* Other HIS….2 Both DHIS & other HIS…..3 Former member DHI.4 Never member..... 5	Has anyone in this household used any health service in the past month? Yes……..1 No……2	Has [name] been hospitalized in the past 12 months? Yes….1 No.....2	Yes……..1 No……...2 NA……..9 **(only women between 12 to 55 years old)**	*Has [woman] given birth in the past 12 months?* Yes...…….01 No…….02 NA……..99 **(only women between 12 to 55 years old)**
H2.	**H2.2**	**H2.3**	**H2.4**	***H2.5***	***H 2.6***	***H2.7***	***H2.8***	***H2.9***	***H2.10***	***H2.11***	***H2.12***	***H2.13***

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* *(Screening for module 3)***
	First Name	HH head…..…1 Spouse……….2 Child……3 Grandchild…...4 Other relative…5 Domestic wker..6 Friend……7 In-law..……8 Other……...…96	*How old is this person in completed years?*	*Male ……...1* Female….2	Married……..1 Never married…….2 Divorced……3 Windowed…..4 Separated….5 Living together……6 Child……..7 Other……...96	None…….....1 Child……2 Pre-primary...3 Primary.....4 Middle/JSS…5 Tech/voc…...6 Secondary…7 Tertiary……8	Employed (Full time)……..1 Self employed...2 Casual……..3 Unemployed…..4 Pensioner……..5 Student/learner..6 Child ……7 Apprentice ……8 Other…….. 96	*Registered for DHIS……1* Other HIS….2 Both DHIS & other HIS…..3 Former member DHI.4 Never member.....5	Has anyone in this household used any health service in the past month? Yes……..1 No……2	Has [name] been hospitalized in the past 12 months? Yes….1 No.....2	Yes……..1 No……...2 NA……..9 **(only women between 12 to 55 years old)**	*Has [woman] given birth in the past 12 months?* Yes...…….01 No…….02 NA……..99 **(only women between 12 to 55 years old)**
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1.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐
2.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* (Screening for module 3)**
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3.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐
4.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* (Screening for module 3)**
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6.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* (Screening for module 3)**
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8		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* (Screening for module 3)**
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Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* (Screening for module 3)**
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11.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐
12.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

Line No.	***Usual Residents***	***Relationship to Head of Household***	***Age***	***Sex***	***Marital status***	***Highest level of education completed***	**Employment Status**	***Health Insurance Membership status***	***Recent use of a health service other than inpatient and delivery (screening for module 1)***	***Hospitalization (screening for mod.2)***	***Currently pregnant* (Screening for mod.3)**	***Recent Birth* (Screening for module 3)**
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14.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

Line No.	*Usual Residents*	*Relationship to Head of Household*	*Age*	*Sex*	*Marital status*	*Highest level of education completed*	**Employment Status**	*Health Insurance Membership status*	*Recent use of a health service other than inpatient and delivery (screening for module 1)*	*Hospitalization (screening for mod.2)*	*Currently pregnant* **(Screening for mod.3)**	*Recent Birth* *(Screening for module 3)*
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15.		☐	☐☐	☐	☐	☐	☐	☐	☐	☐	☐	☐☐

H2.14 Total number of household members: ☐☐	**H 2.15 Total number of household members** (count all for whom H2.9 =1,3 or 4) ☐☐ **in DHIS:**

Table 2

No	***First name***	***Chronic Illness***	***Type of chronic illness***	***Taking drugs for chronic illness***	***Reasons for not taking drugs for chronic illness***	***General Health Status***	***Recent Illness***	***Type of illness***	**If ill, did *name* seek care?**	***If name did not seek care, why did name not seek care?***
	Name (**the same order as above**)	*Has any household member been taking a drug regularly for the past **6 months** or more prescribed by a doctor/nurse for blood pressure or any long term illness?* Yes…….....1 No……..2 Don't know…....88 (**If 2 or 88 skip to H2.20**)	What type of chronic illness does this household member suffer from?	Is household member currently on drugs, for the chronic illness? Yes……1 No……2 DK……...88 NA……...99 (**If 1 or 88 skip to H2.20**)	Why is household member not on drugs for the chronic illness?	*What is (NAME) health in general?* Very good...1 Good……2 Average…...3 Poor…….4	Has (**name**) been ill or injured in the past month? Yes…….1 No…….....2 **(If 2 skip to H 3.1)**	What illness?	If ill, did ***name*** seek care? Yes……..1 No……...2 NA……..9 **(If yes skip to H 3.1)**	
		H2.16	***H 2.17***	***H2.18***	***H2.19***	***H2.20***	***H2.21***	***H2.22***	***H2.23***	***H2.24***
1										

No	***First name***	***Chronic Illness***	***Type of chronic illness***	***Taking drugs for chronic illness***	***Reasons for not taking drugs for chronic illness***	***General Health Status***	***Recent Illness***	***Type of illness***	**If ill, did *name* seek care?**	***If name did not seek care, why did name not seek care?***
	Name (**the same order as above**)	*Has any household member been taking a drug regularly for the past **6 months** or more prescribed by a doctor/nurse for blood pressure or any long term illness?* Yes…….....1 No……..2 Don't know…...88 (**If 2 or 88 skip to H2.20**)	What type of chronic illness does this household member suffer from?	Is household member currently on drugs, for the chronic illness? Yes……1 No……2 DK……..88 NA……...99 (**If 1 or 88 skip to H2.20**)	Why is household member not on drugs for the chronic illness?	*What is (NAME) health in general?* Very good...1 Good……2 Average…...3 Poor…….4	Has (**name**) been ill or injured in the past month? Yes…….1 No…….....2 **(If 2 skip to H 3.1)**	What illness?	If ill, did ***name*** seek care? Yes……..1 No……...2 NA……..9 **(If yes skip to H 3.1)**	
2										
3										
4										

No	***First name***	***Chronic Illness***	***Type of chronic illness***	***Taking drugs for chronic illness***	***Reasons for not taking drugs for chronic illness***	***General Health Status***	***Recent Illness***	***Type of illness***	**If ill, did *name* seek care?**	***If name did not seek care, why did name not seek care?***
	Name (**the same order as above**)	*Has any household member been taking a drug regularly for the past **6 months** or more prescribed by a doctor/nurse for blood pressure or any long term illness?* Yes…….....1 No……..2 Don't know…...88 (**If 2 or 88 skip to H2.20**)	What type of chronic illness does this household member suffer from?	Is household member currently on drugs, for the chronic illness? Yes……1 No……2 DK……..88 NA……...99 (**If 1 or 88 skip to H2.20**)	Why is household member not on drugs for the chronic illness?	*What is (NAME) health in general?* Very good...1 Good……2 Average…...3 Poor…….4	Has (**name**) been ill or injured in the past month? Yes…….1 No….....2 **(If 2 skip to H 3.1)**	What illness?	If ill, did ***name*** seek care? Yes……..1 No……...2 NA……..9 **(If yes skip to H 3.1)**	
5										
6										
7										

No	***First name***	***Chronic Illness***	***Type of chronic illness***	***Taking drugs for chronic illness***	***Reasons for not taking drugs for chronic illness***	***General Health Status***	***Recent Illness***	***Type of illness***	**If ill, did *name* seek care?**	***If name did not seek care, why did name not seek care?***
	Name (**the same order as above**)	*Has any household member been taking a drug regularly for the past **6 months** or more prescribed by a doctor/nurse for blood pressure or any long term illness?* Yes…….....1 No……..2 Don't know…...88 (**If 2 or 88 skip to H2.20**)	What type of chronic illness does this household member suffer from?	Is household member currently on drugs, for the chronic illness? Yes……1 No……2 DK……..88 NA……...99 (**If 1 or 88 skip to H2.20**)	Why is household member not on drugs for the chronic illness?	*What is (NAME) health in general?* Very good...1 Good……2 Average…...3 Poor…….4	Has (**name**) been ill or injured in the past month? Yes…….1 No…….....2 **(If 2 skip to H 3.1)**	What illness?	If ill, did ***name*** seek care? Yes……..1 No……...2 NA……..9 **(If yes skip to H 3.1)**	
8										
9										
10										

No	***First name***	***Chronic Illness***	***Type of chronic illness***	***Taking drugs for chronic illness***	***Reasons for not taking drugs for chronic illness***	***General Health Status***	***Recent Illness***	***Type of illness***	**If ill, did *name* seek care?**	***If name did not seek care, why did name not seek care?***
	Name (**the same order as above**)	*Has any household member been taking a drug regularly for the past **6 months** or more prescribed by a doctor/nurse for blood pressure or any long term illness?* Yes…….....1 No……..2 Don't know…...88 (**If 2 or 88 skip to H2.20**)	What type of chronic illness does this household member suffer from?	Is household member currently on drugs, for the chronic illness? Yes……1 No……2 DK……..88 NA……...99 (**If 1 or 88 skip to H2.20**)	Why is household member not on drugs for the chronic illness?	*What is (NAME) health in general?* Very good...1 Good……2 Average…...3 Poor…….4	Has (**name**) been ill or injured in the past month? Yes…….1 No…….....2 **(If 2 skip to H 3.1)**	What illness?	If ill, did ***name*** seek care? Yes……..1 No……...2 NA……..9 **(If yes skip to H 3.1)**	
11										
12										
13										

No	***First name***	***Chronic Illness***	***Type of chronic illness***	***Taking drugs for chronic illness***	***Reasons for not taking drugs for chronic illness***	***General Health Status***	***Recent Illness***	***Type of illness***	**If ill, did *name* seek care?**	***If name did not seek care, why did name not seek care?***
	Name (**the same order as above**)	*Has any household member been taking a drug regularly for the past **6 months** or more prescribed by a doctor/nurse for blood pressure or any long term illness?* Yes…….....1 No……..2 Don't know…...88 (**If 2 or 88 skip to H2.20**)	What type of chronic illness does this household member suffer from?	Is household member currently on drugs, for the chronic illness? Yes……1 No……2 DK……..88 NA……...99 (**If 1 or 88 skip to H2.20**)	Why is household member not on drugs for the chronic illness?	*What is (NAME) health in general?* Very good...1 Good……2 Average…...3 Poor…….4	Has (**name**) been ill or injured in the past month? Yes…….1 No…….....2 **(If 2 skip to H 3.1)**	What illness?	If ill, did ***name*** seek care? Yes……..1 No……...2 NA……..9 **(If yes skip to H 3.1)**	
14										
15										

Codes for H2.17	**Codes for H2.19**	**Codes for Illness (H2.22)**	**Codes for not seeking care (H2.24)**
Diabetes……1 Hypertension……2 Arthritis……3 Gastric ulcer……..4 Gout…….....5 Schizophrenia .....6 Asthma ……7 Sinusitis…….8 Other (specify).....96	Drugs expensive……...1 Don't know that drugs are supposed to be taken…….....2 Drugs not available in community…3 No money to buy……...4 No need for drugs……..……5 Feel ok……...6 Other (specify)_____96 DK……88 NA……99	Malaria……1 ARI…….2 Diarrhea……..3 Skin disease……4 Fracture……...5 Aches and pains…..6 Other (specify)……96 NA……..99	Thought it was not serious……....1 Could not afford transport costs…….……...2 Could not afford health care costs…….3 Health facility/provider too far……..4 Could not get time off work……..5 Could not afford to take time off work…….6 Queues too long at the health facility……...7 Care available unlikely to make me get better…..8 Will not be treated respectfully…….……9 Facility does not offer the services needed……10 Facility can't solve my particular health problem..11 Other (Specify)……..…….96 NA……99

SECTION 3: DISTRICT MUTUAL HEALTH INSURANCE MEMBERSHIP

Please copy the line number (H2.1) and name (H2.2) of each person in the Household Roster who is registered with the DHIS. That is, everyone for whom H2.9 = 1, 3 or 4.

The total number of people recorded in this table should be equal to H2.15.

Line No.	***Name of Person***	***When was the last time this person was registered for the DHIS?***	***Was s/he exempt from paying DHIS premium for this registration?***	***How much did you pay for this person's DHIS premium?***	***How much did you pay for this person's DHIS registration fee?***	***Total amount paid for DHIS membership for last registration?***	***Did s/he receive the DHIS card for this last registration?***	***When did s/he receive this DHIS card?***
Enumerator, copy (from Household Roster) the line number and name only for the members of the DHIS (H 2.9=1, 3 or 4)		**Record Month and Year** Don't know……..88 NA……..99	YES……..1 NO……2 Don't know……88 NA……99	**Record amount in old Cedis** Don't know……888 NA……999	**Record amount in old Cedis** Don't know……..888 NA……999	**Record amount in old Cedis.** Don't know……..888 NA……999	YES……..1 NO……2 Don't know…….88 NA……99	**Record Month and Year** Don't know……88 N/A(Did not receive card)……..99
H3.1	H3.2	H3.3	*H3.4*	*H3.5*	*H3.6*	*H3.7*	*H3.8*	*H3.9*
		Month Year		……	……	……		Month Year
		Month Year		……	……	……		Month Year
		Month Year		……	……	……		Month Year

		Month Year								Month Year
		Month Year								Month Year
		Month Year								Month Year
Line No.	***Name of Person***	***When was the last time this person was registered for the DHIS?***		***Was s/he exempt from paying DHIS premium for this registration?***	***How much did you pay for this person's DHIS premium?***	***How much did you pay for this person's DHIS registration fee?***	***Total amount paid for DHIS membership for last registration?***	***Did s/he receive the DHIS card for this last registration?***	***When did s/he receive this DHIS card?***	
Enumerator, copy (from Household Roster) the line number and name only for the		**Record Month and Year** Don't		YES……..1 NO……2	**Record amount in old Cedis** Don't	**Record amount in old Cedis** Don't	**Record amount in old Cedis.** Don't know……..888	YES……...1 NO…… 2	**Record Month and Year** Don't know……88 N/A (Did not	
		Month Year								Month Year
		Month Year								Month Year
		Month Year								Month Year

		Month Year				.....	.....	.....		Month Year			
		Month Year				.....	.....	.....		Month Year			
H3.10 Total Paid for All (in old Cedis)						.....	.....	.....					

SECTION 4: NATIONAL HEALTH INSURANCE

(Now I would like to ask you more issues concerning the national health insurance scheme)

H4.1	Have you heard of the DHIS? **Ask only those who have never been members of DHIS; Circle 99 for former and current members**	Yes……...1 No……..……2 NA…….99	**If 2 go to H4.4**
H4.2	From which **main** source did you hear about DHIS? **(ask if 4.1 is 1…Yes and 99….NA)**	At the health facility/provider…….....1 Over the radio……..2 On TV……..3 Health Insurance agent……4 From a relative…….5 From a friend……...6 From an information van……..7 Other (Specify)……96 DK……88 NA……99	
H4.3	What do you know about DHIS?	Prepayment for health care……1 Paying tax to government……..2 Free health care delivery by gov't….....3 Other (specify)_____96 NA…….99	

H4.4	What criteria do you think should be used to identify a poor person? (**CIRCLE ALL MENTIONED**)	The disabled……..…….……..1 Old/aged people……...2 Unemployed/can not earn a living……...3 Those with no say/voice …….4 Those who can not provide own need…….5 One with many children……..6 Homeless…….7 Person who can not get food …….……..8 Person in tattered clothing…….……..…9 Person without farm or animals……..….10 Other (specify)_____96	
Households that are currently insured with the DHIS			
H4.5	Why did you or members of your household join the scheme?	Financial protection against unforeseen illness……..... .1 I believe it is a better alternative to the cash and carry …….....2 A relative/friend asked me to join……3 Other (Specify)_____96 NA…….. .99	

H4.6	Why are some household members enrolled in the DHIS and others not? **ASK, IF SOME HOUSE HOLD MEMBERS ARE NOT PART OF THE DHIS IN H2.9**	Insured only those exempt from premiums…1 Coverage elsewhere (e.g. employer)……..2 Can only afford to insure some members…..3 Have insured sick/ill members only……..4 Financial difficulties……..5 Card not ready……...6 Other (specify)_____96 Don't Know……..88 NA……99	
H4.7	As an insured household, what are the benefits that you expect from the scheme? **MULTIPLE RESPONSES ALLOWED**	Early attendance at health facilities……1 Prompt treatment and services……..2 Availability of drugs……..3 Good attitude of health staff……..4 Free health care in times of need……...5 Other (Specify)_____ 96 DK …….....88 NA …….....99	
H4.8	Do you know whether you need to renew the DHIS membership for your household members?	Yes, need to renew……1 Don't need to renew/only need to register once……...2 DK……88 NA……99	**If 2 or 88 go to H4.11**

H4.9	Do you know how often you need to renew membership with the DHIS?	Yes……1 No……2 DK……88 NA……..99	**If 2 or 88 go to H4.11**
H4.10	How often do you need to renew DHIS membership?	Every year……1 Other (Specify)_____96 DK……...……88 NA……..99	**Ask if 4.9 is Yes=1**
H4.11	How do you **find the registration fee**?	High ……..……1 Moderate/Affordable……...……2 Low……..…….3 DK…….……..……...88 NA……..…99	
H4.12	How do you find the premium level? **(Ask all members and find from formal workers how they find the 2.5% deduction)**	High ……..……...1 Moderate……..……2 Low……...……...3 DK……88 NA…….……..99	

H4.13	What would you like to be done about the current premium levels?	The current levels should be maintained…..1 It should be revised upwards……..……..2 It should be revised downwards……3 Other (specify)_____96 DK……88 NA……99	
H4.14	How do you find the timing of premium collection and registration? **(ask all members and find out from formal sector workers their monthly deductions)**	Appropriate ……1 Inappropriate ……...2 NA…….99	**If 1 go to H4.16**
H4.15	When should it be? **(ask all members and find from formal sector workers the monthly deductions)**	First quarter of the year……..1 Second quarter of the year…….....2 Third quarter of the year……3 Last quarter of the year…….....4 Throughout the year…….....5 Yearly……6 Other (specify)_____96 NA……..…….99	

H4.16	From what source/s of money did you pay the registration fees and premiums? **MULTIPLE RESPONSES ALLOWED**	SALARY ……1 SOLD AGRICULTURAL PRODUCE ..... …….2 SOLD ASSETS (HOUSEHOLD TOOLS) ..... …….3 TOOK MONEY FROM SAVINGS (BANK) ..... …4 TOOK MONEY FROM SUSU COLLECTOR. ..... 5 BORROWED FROM FRIEND/RELATIVE…..... 6 BORROWED FROM MONEY LENDER….. ..... 7 RECEIVED A GIFT ……....8 OTHER (SPECIFY)_____96 DK…… …….88 NA…… ……..99	
H4.17	Have you or any member of your household **used your ID cards to seek health care** in a hospital, health centre or clinic?	Yes…….…….....1 No…….…….…….2 DK……..…88 NA……..…99	**If 2 skip to H 4.21**
H4.18	Why did you or any member of your household **seek health care** after joining the scheme?	Was genuinely ill……1 Just testing the scheme……..…2 Once paid I had to go……....3 Other (specify)_____96 NA…….....99	
H4.19	Were you or other members of the household **satisfied** with the services provided at the health facility?	Yes…….…….....1 No…….……..2 NA……99	**If 1 skip to H4.21**

H4.20	Why were you or any member of your household **not satisfied** with the services at the health facility? **(MULTIPLE RESPONSES)**	Did not get drugs in the facility…….1 Refuse drugs because scheme owes facility..2 Bad attitude of the health staff……...3 Long waiting period…….....4 Other (specify)_____96 NA…….....99	
H4.21	For **how many years** have you been a member of the scheme? **FOR THE RESPONDENT**	Less than one year……1 One year……2 Two years…….....3 Three years……...4 Four years…….5 Five years…….6 More than five years……..……..…...7 NA…….....99	
H4.22	Do you know the benefits you and your household are entitled to as members of the DHIS?	YES…….....1 NO…….……2 DON'T KNOW…….……88 NA…….99	**If 2 or 88 skip to H4.24**
H4.23	What are the benefits that you and your household are entitled to?	FREE HEALTH CARE FOR ALL ILLNESSES…..…..1 FREE HEALTH CARE FOR SELECTED ILLNESSES…….2 OTHER (SPECIFY)_____96 NA…….99	

H4.24	Has joining the District Health Insurance Scheme been beneficial to you?	Yes .....1 No.....2 NA…… ……...99	**If 2 skip to H4.26**
H4.25	What has been the benefit(s)? **MULTIPLE RESPONSES ALLOWED**	Saved money from paying hospital bills…...1 Did not need to borrow to pay for hospital bills…… ….2 Was not afraid using health facilities because of cost…… 3 Can now use health services to prevent illness becoming severe……4 Other (specify)_____96 NA…….. ..99	**If ANY skip to H 4.27**
H4.26	Why has joining the DHIS not been beneficial to you?	Does not cover everything…….1 Never use the health service after joining….2 My choice of health facility excluded……...5 Health facility too far……4 Other (specify)_____96 NA…….. 99	
H4.27	Do you know about the exemption package under the DHIS	Yes……..... 1 No…….. 2 NA……..... 99	**If 2 go to H4.31**
H4.28	What is your perception about the exemption package?	Adequate……. 1 Inadequate……..... .2	

		Other (specify)_____96 NA……. 99	
H4.29	What would you like to be done about the exemptions package?	Should be maintained……..….1 Should be enlarged……..2 Should be reduced……...3 Other (specify)_____96 DK…….. 88 NA…….. 99	
H4. 30	Who in your opinion should be exempted under the health insurance scheme? **MULTIPLE RESPONSES ALLOWED**	The poor in general……1 Widowed..……..... .2 Aged …….…….....3 Mental patients…...…….....4 The disabled……..…….….....5 Pregnant women…..…….....6 Children (U5)…….……..……..…..7 From 5 to 17 years old……8 Other (specify)_____ 96 NA……..... .99	
H4.31	Will you continue to be a member of the District Health Insurance Scheme?	Yes…….……..... .1 No…….…….. .2 NA……..……..99	**If 2 go to H4.33**

H4.32	Why will you like to continue to be member of the DHIS?	Financial protection against unforeseen illness……..... .1 I believe it is a better alternative to the cash and carry …….....2 Other (specify)……..3 NA…… …99	**If 1, 2 or 3 skip to H4.42**
H4.33	Why would you not continue to be a member of the District Health Insurance Scheme? I don't see why I should continue Has not been sick Amount (premium) being paid is high Not getting the services I needed I still buy drugs after the service Other (Specify)	Yes No DK Don't see why I should Continue……1 2 88 Not been sick……..1 2 88 Premium too high…….1 2 88 Not getting services I need…… 1 2 88 Still buys drugs after Service…….1 2 88 Other (Specify)_____96 NA……99	
Former members of the NHIS			
H4.34	Why have you not renewed your membership? No money No confidence in scheme again… Not satisfied with provider(s) Premium too expensive Registration fee expensive Inappropriate timing of premium Benefit package inadequate Did not use services previous year Not available at time of registration Difficulty in accessing services Waiting period too long Poor quality of care Other (specify)	Yes No DK No money…… 1 2 88 No confidence in scheme again… .1 2 88 Not satisfied with provider(s)...…..1 2 88 Premium too expensive……..1 2 88 Registration fee expensive...……...1 2 88 Inappropriate timing of premium…1 2 88 Benefit package inadequate…….…1 2 88 Did not use services previous year...1 2 88 Not available at time of registration.1 2 88 Difficulty in accessing services… 1 2	

		88 Waiting period too long……... 1 2 88 Poor quality of care…….…… 1 2 88 Other (specify)_____96 NA…… ……..99	
H4.35	What would make you rejoin the health insurance scheme?	Availability of drugs……...1 Improved attitude of health staff...…….2 Improving the benefit package……...3 Reducing premium…….....4 If health facility is closer ……...5 Other (specify)_____96 NA……..... .99	
H4.36	What is the **main** reason **no one** from your household is enrolled in the district health insurance scheme?	Not aware of district HI scheme…….1 Just recently learned of HI scheme…….2 Premiums is unaffordable……...3 Benefits/services are not adequate……..4 Not confident in scheme…….5 Don't trust provider……6 Waiting period too long……..7 Registration point not accessible……....8 Covered elsewhere(e.g. employer)……9 No perceived need for	

		insurance……...10 Prefer to go to private provider/not participating in DHIS…….11 Card just expired…….12 Other (specify)_____96 DK……88 NA……..99	
H4.37	Why are some household members enrolled in the DHIS and others not? **ASK, IF SOME HOUSE HOLD MEMBERS ARE PART OF THE DHIS**	Insured only those exempt from premiums…1 Coverage elsewhere (e.g. employer)……..2 Can only afford to insure some members…..3 Have insured sick/ill members only……..4 Financial difficulties……..5 Other (specify)_____96 DK……88 NA……99	
H4.38	Are there **other reasons** why no one from your household is enrolled? **MULTIPLE RESPONSES ALLOWED**	Not aware of district HI scheme…….1 Just recently learned of HI scheme…….2 Premiums is unaffordable……...3 Benefits/services are not adequate……..4 Not confident in scheme…….5 Don't trust provider……6 Waiting period too long……..7 Registration point not accessible……....8 Covered elsewhere(e.g.	

		employer)…….9 No perceived need for insurance……...10 Prefer to go to private provider/not participating in NHIS…….11 Don't understand the scheme…….12 Other (specify)_____96 DK……88 NA……..99	
Never been members (not insured) of the NHIS			
H4.39	Why are you or members of your household not insured (**never been insured**) with the scheme? (**MAIN REASON**)	Not heard about NHIS…….....1 No Scheme in the area…….....2 Timing of premium collections inappropriate……..3 Poor quality of care…….4 Premiums unaffordable……...5 Inadequate benefit package…….…...6 Waiting period too long……..…….……7 Don't trust providers…….....8 No confidence in scheme…….9 No money…….....10 Prefer out of pocket payment……...11 Registration point not accessible…….12 Covered by a private health insurance…….13 Other(specify)_____96	

		NA……..……..99	
H4.40	Why are some household members enrolled in the DHIS and others not? **ASK IF SOME HOUSEHOLD MEMBERS ARE PART OF THE DHIS**	Insured only those exempt from premiums…1 Coverage elsewhere (e.g. employer)……..2 Can only afford to insure some members…..3 Have insured sick/ill members only……..4 Financial difficulties……..5 Other (specify)_____96 DK……88 NA……99	
H4.41	What would make you join the health insurance scheme? (**Main reason**)	Availability of drugs……1 Improved attitude of health staff...……...2 Improving the benefit package…….3 Reducing premium…….....4 If health facility is closer …….5 Active purchasing of services by insurers…….……...6 Attitude of DHIS staffs…….7 Other (specify)_____96 NA……..99	
FOR ALL RESPONDENTS (INSURED AND UNINSURED MEMBERS)			
H4.42	What **aspects** of good quality care at **public clinics or health centres (HC)** would give you trust and confidence in the service? I will read out a list; please can you tell me which is most important to you, which is the second most important and so on. **WRITE 1 FOR THE MOST IMPORTANT, 2 FOR THE NEXT MOST IMPORTANT**	If I knew that nurses at clinics or HC are properly trained to treat my illness	
		If I was sure that I would be referred to see a doctor if the clinic or HC nurse could not treat my illness	
		If I only had to wait ½ hour before being treated at the clinic or HC	
		If I could see the same nurse at the clinic or HC every time I go there	
		If the staff at the clinic or HC are kind and understanding	
		If the clinic or HC always had the drugs that I needed	

	ETC		
H4.43	What **aspects** of good quality care at **public hospitals** would give you trust and confidence in the service? I will read out a list; please can you tell me which is most important to you, which is the second most important and so on. **WRITE 1 FOR THE MOST IMPORTANT, 2 FOR THE NEXT MOST IMPORTANT ETC**	If the hospital was clean	
		If I could make an appointment to see a doctor at the hospital at a specific time	
		If I was sure that I would be listened to and understood by doctors and nurses and that I would understand what they tell me about my condition and treatment	
		If I was sure that hospital staff would keep my health problems confidential	
		If transport was provided to and from a hospital if I was referred there	
H4.44	What **other aspects** of good quality care at **public hospitals** would give you trust and confidence in the service? I will read out a list; please can you tell me which is most important to you, which is the second most important and so on. **WRITE 1 FOR THE MOST IMPORTANT, 2 FOR THE NEXT MOST IMPORTANT ETC**	If the staff at the hospital are kind and understanding	
		If I only had to wait one hour before being treated at the hospital	
		If I was able to see a nurse or doctor and discuss my health problems in private	
		If the hospital always had the drugs that I needed	
		If I could lay a complaint about the service I received and knew that it would be acted on	

ATTITUDES TOWARDS THE NATIONAL HEALTH INSURANCE SCHEME

Statement		Strongly agree	Agree	Disagree	Strongly disagree	Don't Know
H4.45	Insured members are given poor quality drugs	1	2	3	4	88
H4.46	Insured are not treated well as those who are not insured	1	2	3	4	88
H4.47	Too much time is spent at the public health facility therefore it is better to visit private health facilities.	1	2	3	4	88
H4.48	It is not useful to insure if you don't fall sick often	1	2	3	4	88
H4.49	Only those who fall sick often should pay to get insured with the NHIS.	1	2	3	4	88
H4.50	It's good to pay to become an NHIS member even if I don't fall sick.	1	2	3	4	88
H4.51	The benefit package is not broad enough.	1	2	3	4	88
H4.52	It is good to renew my membership by paying every year even if I don't use the facility within the insurance year.	1	2	3	4	88
H4.53	I think those who are uninsured get better care at the health facility.	1	2	3	4	88
H4.54	I think members of the scheme should be free to go to which ever facility they choose to go to.	1	2	3	4	88
H4.55	Staff attitude towards insured clients is bad.	1	2	3	4	88
H4.56	Insured clients spend too much time in the health facility compared to the	1	2	3	4	88

	uninsured.					
H4.57	If I or a family member were to become ill and had to go to the hospital we would be able to afford the bill of the doctor, tests and medicines prescribed.	1	2	3	4	88
H4.58	I would agree to pay a small amount of money each year for free medical care when I need it even if I'm not sick now.	1	2	3	4	88
H4.59	The District Health Insurance Schemes act in the best interest of their members.	1	2	3	4	88
H4.60	People should get equal treatment whether you are an insured member or not	1	2	3	4	88

H4.61	**I will like to ask you about your views on how much different people should pay towards health care** The DHIS is in place to provide full cost of the day to day health care needs of the people. Payments to enrol as a member are in various categories. On this card, there are three classes of people and each has a different income. Which of these options do you think best indicates what you think each person should contribute towards the health insurance scheme? (**SHOW CARD A and write option number in the box)**	

SECTION 5
SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT AND HOUSEHOLD

(*Either household head or an adult member of household if household head is absent*)

No	Questions	Coding category	Skip
H5.1	What is your ethnic background?	Dagare……1 Wala……2 Akan……3 Ga……4 Dangme……5 Dagomba……6 Gonja……7 Ewes……8 Mamprusis……9 Other(specify)_____96	
H5.2	What is your religion?	Traditional……1 Christian……2 Muslim……3 Other (specify)_____96	
H5.3	What is your **main** occupation?	Subsistence farmer……1 Large scale farmer……2 Trader……3 Government worker……4 Private formal worker……5 At school……6 Artisan……7 None……8 Other (specify)_____96	
H5.4	Is the house you are staying in your own, family house or rented?	Own……1 Family house……2 Rented……3 Other (specify)_____96	
H5.5	How many rooms, including kitchens does your home have?	☐☐	
H5.6	How many sleeping rooms are in your household?	☐☐	
H5.7	Does this household have a modern design? (i.e. zinc/aluminum roofing excluding animal pond) (**observe**)	Yes……1 No……2	

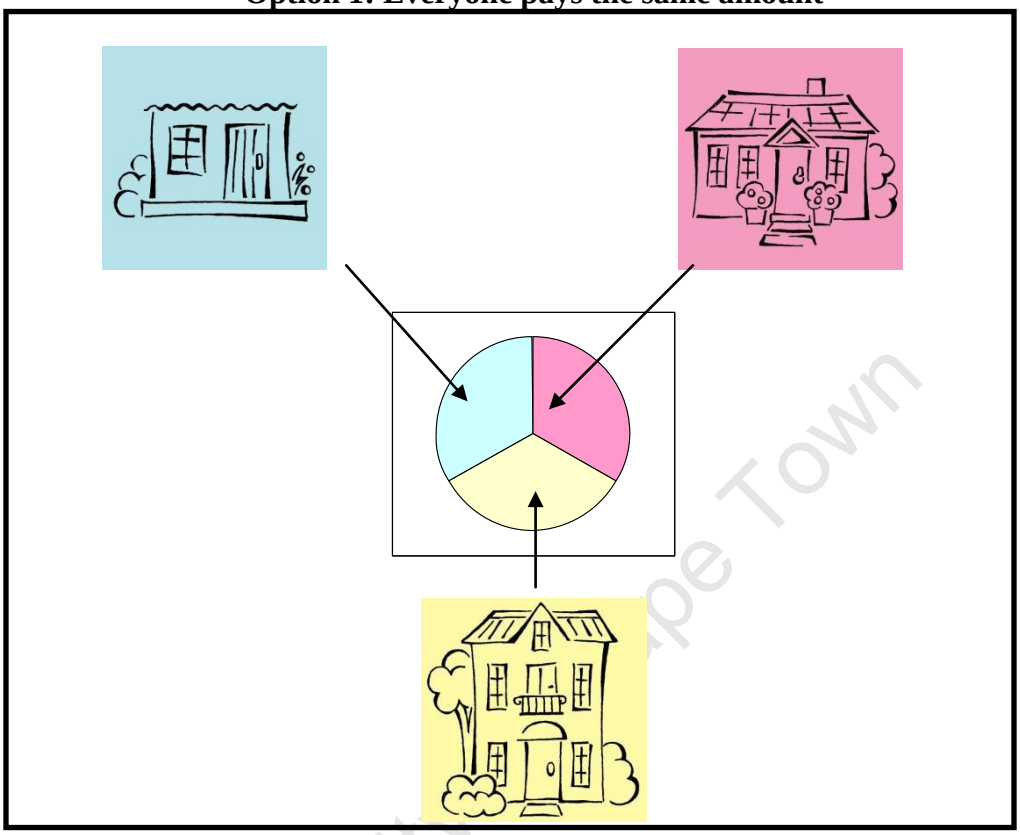
H5.8	What is the **main** material for the wall? **(observe)**	Concrete……..…… …1 Mud…… .2 Bricks……..... .3	

H5.9	What is the **main** roofing material **(excluding animal compounds)**	Zinc/Aluminium……1 Concrete……..……..2 Asbestos…….3 Thatch……..…….4 Concrete tiles...…….5 Other (specify)_____96	
H5.10	Does the household have electricity? **(Ask and observe)**	Yes...……..1 No…….……..2	
H5.11	What cooking utensils are **frequently** used in this household?	Earth bowls….. ……. ……..…1 Aluminum pans…..…….....2 Other (specify)_____ 96	
H5.12	What type of cooking fuel do you use (**main**)?	Gas……...1 Electricity……2 Wood……...3 Charcoal……..4 Stalks……...5 Other (specify)_____96	
H5.13	What is the **common** toilet facility used by this household?	Free range……1 Shared Pit latrine……2 Own Pit latrine……3 Shared KVIP……..4 Own KVIP…….5 Own flush toilet…….....6 Shared flush toilet……7 Other (specify)_____96	
H5.14	What is the **main source** of drinking water for this household?	Pipe borne water ……..1 Bore-hole……...2 Well water…….……3 Dam/dugout…..……..……4 Stream…….……..5 Bottle water…….…..6 Sachet water…….…7 Other (specify)_____96	
H5.15	During the season when food prices are highest, does your household face food shortage?	Yes……..……1 No…….……...2	
H5.16	Did you farm in the last farming season?	Yes……..……1 No…….……...2	**If 2 skip to H5.18**
H5.17	In the last farming season, what would be the market value of your total yield of all your farming activities? (**ESTIMATE in old Ghana cedis**)	Amount □_____ Don't Know…….88 NA…….……..99	
H5.18	What is the main source of income in your household?	Salaries and/or wages……1 Remittances…….……..2 Pensions and grants……..….3 Sales of farm products…….....4	

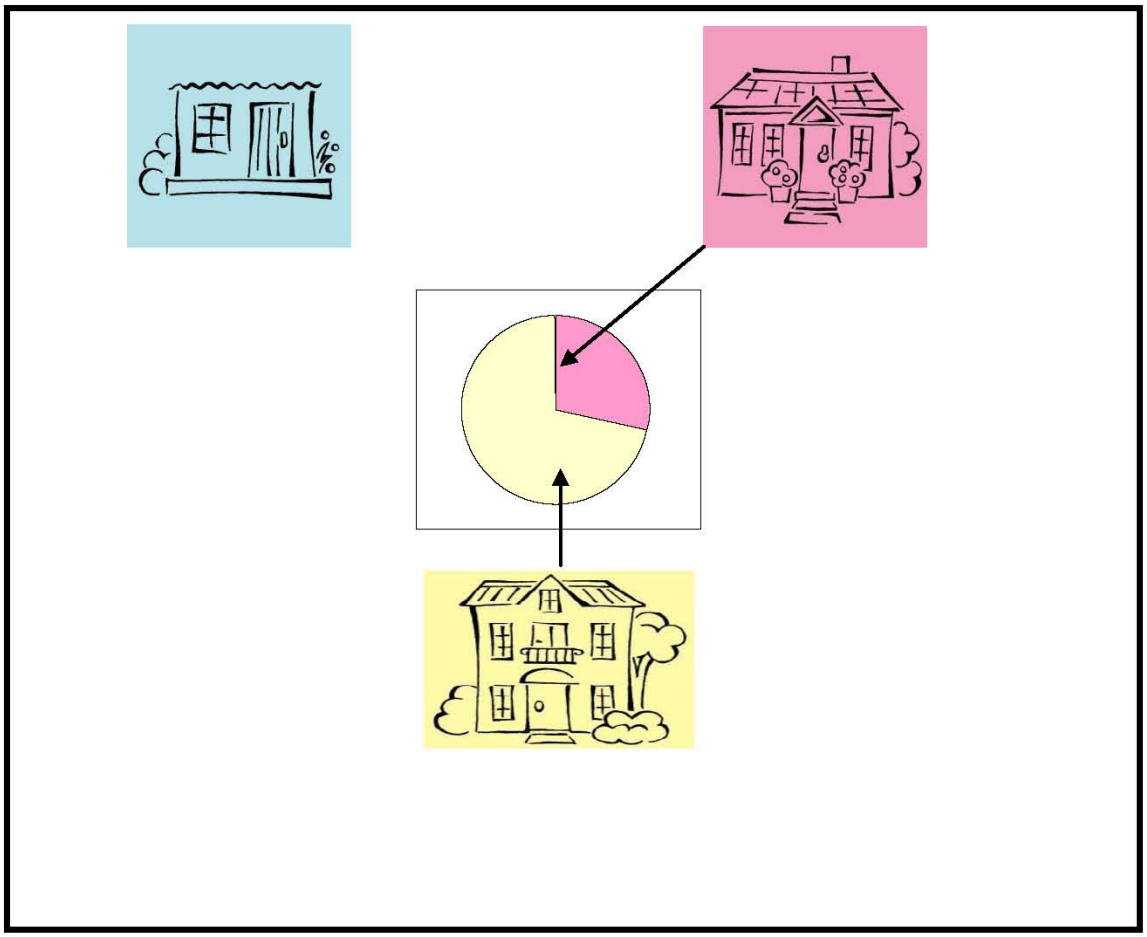
		Other non-farm income……....5 No income……....6 Other (specify)_____96	
H5.19	**[SHOW CARD B] I would like to ask you to indicate how 'well-off' your household is compared to other households in Ghana? [WRITE NUMBER OF BLOCK ON CARD INDICATED BY RESPONDENT; I.E. 1 TO 5]**		

Question H4.61
CARD A: Card on contribution levels to DHIS

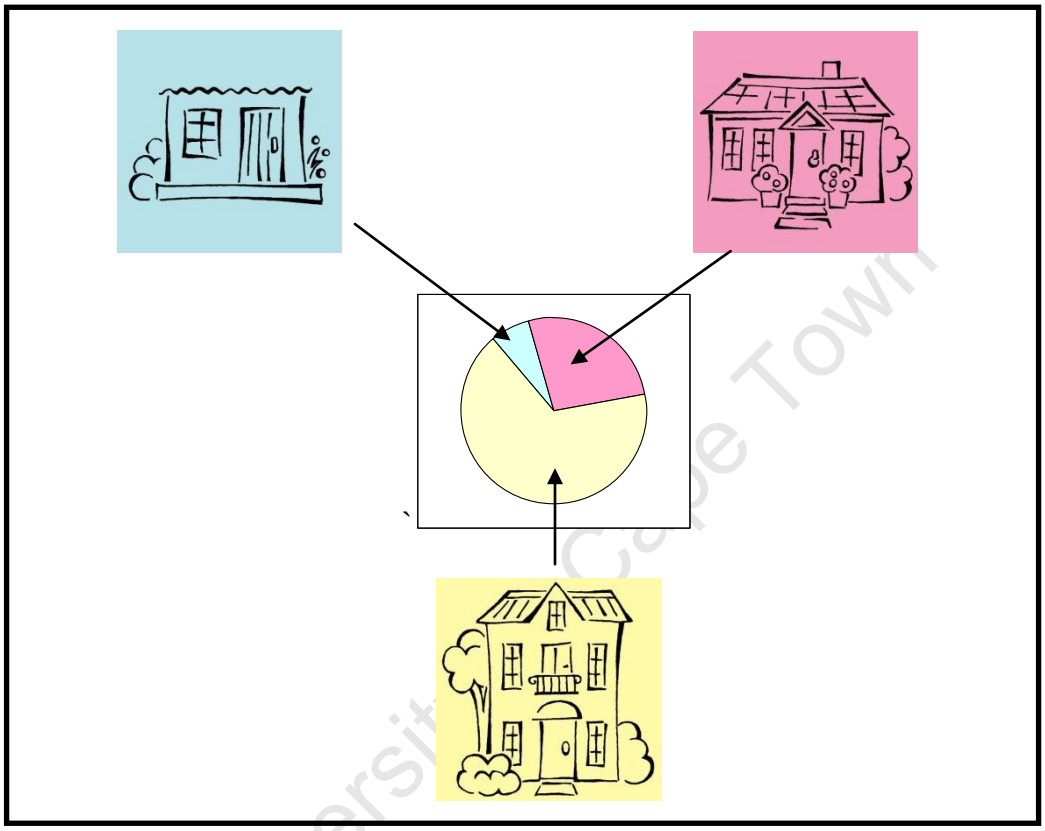
Option 1: Everyone pays the same amount



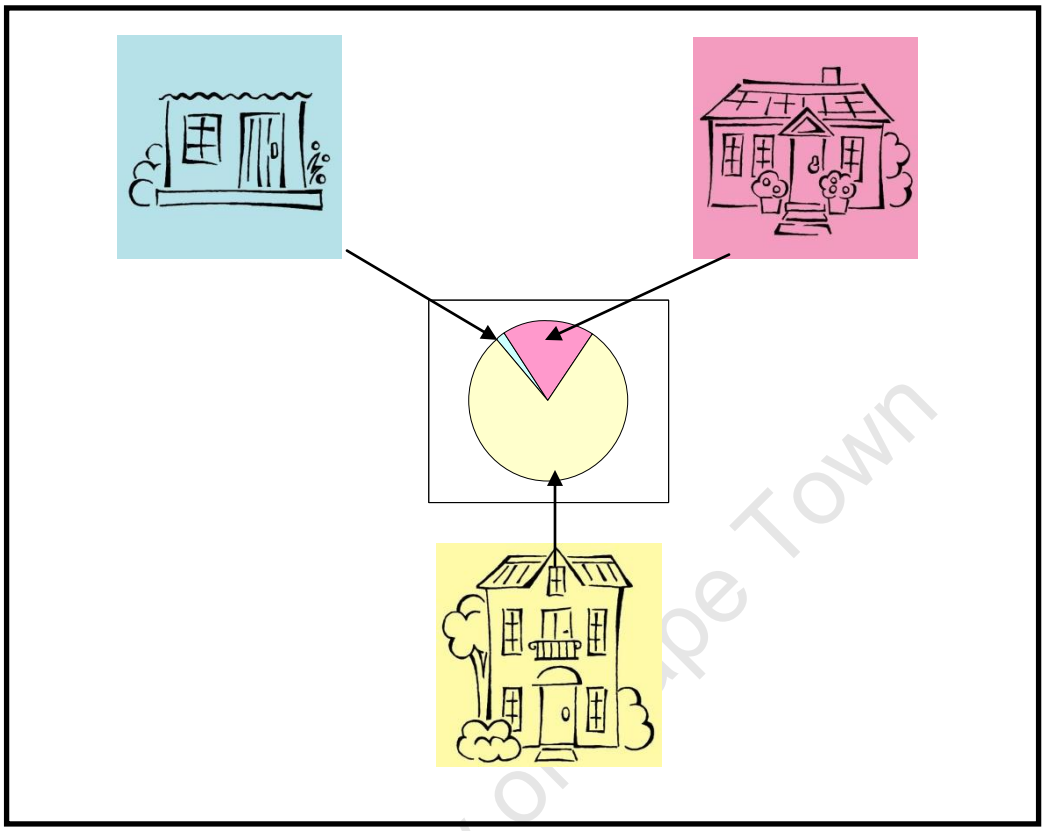
Option 2: The poorest don't have to pay



Option 3: All must pay something, but pay according to their income

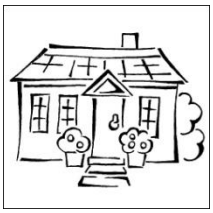


Option 4: All must pay something, but the poorest pay very little



Question H 5.19

CARD B: Card on perceived place in socio-economic hierarchy



1	2	3	4	5

SECTION 6
HOUSEHOLD EXPENDITUE AND DURABLES/ASSETS

In the last month, did the household spend money on the following items? **ESTIMATES (If No…..2, enter 00 but if yes….1, provide amount but if don't know amount put 88)**

No	Item		Amount if Yes=1
H6.1	*Health care*: clinics/HC/hospitals fees, buying drugs from private/market dispensaries, traditional/herbal treatment fees. Ask, apart from **premium and registration fees payments** (for insured), **how much do you think you have incurred** for the health care of you and your household members within the past one month?	Yes……1 No……..2	
H6.2	*Malaria:* HH expenditure on malaria (**from H 6.1 ask what was spent on malaria care**)	Yes……,1 No……..2 DK…….88 NA…….99	
H6.3	*Education:* children school fees, books and other materials, P.T.A and other school contributions	Yes……1 No……..2	
H6.4	*Farming activities:* fertilizer, insecticides, purchase of seeds, irrigation, hired labour, renting equipments, animal feeding, etc	Yes……1 No……..2	
H6.5	*Foods:* including rice, millet, maize, cassava, yam, plantain, cocoyam, beans groundnuts, salt, pepper, etc.	Yes……1 No……..2	
H6.6	*Clothing and shoes:* for both adults and children	Yes……1 No……..2	
H6.7	*Utility services:* water, electricity,	Yes……1 No……..2	
H6.8	*Fuel for transportation:* petrol, taxis and trotro/bus fares etc.	Yes……1 No……..2	
H 6.9	*Fuel for lighting and cooking:* gas for cooking, kerosene, charcoal, firewood	Yes……1 No……..2	
H6.10	*Household utensils:* bowls, pans, buckets, cutlery, pots and other kitchen utensils	Yes……1 No……..2	
H6.11	*Capital goods:* motor vehicle, motor, bicycles, radio, buildings and building materials, grinding mills, etc	Yes……1 No……..2	
H6.12	Rent (only ask if person is renting house)	Yes……...1 No……2 DK…….88 NA…….99	
H6.13	Direct taxes	Yes……1	

		No……..2 DK…….88	
H6.14	Drinks/cola nuts/tobacco/funeral celebration, marriages	Yes……1 No……..2	
H6.15	Paying of debts	Yes……1 No……..2	
H6.16	Others(specify)	Yes……1 No……..2	
H6.17	**Total expenditure (Excluding amount in H 6.2)**		

HOUSEHOLD DURABLE (GOODS & ASSETS) (if Yes….1, provide number, if No….2 Enter 00)

No	Items	Category	Number
H6.18	Do you or any member of this household own **functioning bicycles?**	Yes…1 No….2	
H6.19	Do you or any member of this household own **functioning motorbikes?**	Yes…1 No….2	
H6.20	Do you or any member of this household own **functioning cars/vehicles?**	Yes…1 No….2	
H6.21	Do you or any member of this household own **functioning tractors?**	Yes…1 No….2	
H6.22	Do you or any member of this household own **wooden/iron beds?**	Yes…1 No….2	
H6.23	Do you or any member of this household own **functioning radio sets?**	Yes…1 No….2	
H6.24	Do you or any member of this household own **functioning TV sets?**	Yes…1 No….2	
H6.25	Do you or any member of this household own **functioning sewing machines?**	Yes…1 No….2	
H6.26	Do you or any member of this household own **functioning**	Yes…1	

	electric bulbs and lanterns?	No….2	
H6.27	Do you or any member of this household own **functioning traditional lamps?**	Yes…1 No….2	
H6.28	Do you or any member of this household own **functioning coal pots or kerosene stoves?**	Yes…1 No….2	
H6.29	Do you or any member of this household own **functioning electrical or gas cookers?**	Yes…1 No….2	
H6.30	Do you or any member of this household own **functioning refrigerators/deep freezers?**	Yes…1 No….2	
H6.31	Do you or any member of this household own **functioning DVD/VCD/VHS players?**	Yes…1 No….2	
H6.32	Do you or any member of this household own **functioning telephones** (landline)**?**	Yes…1 No….2	
H6.33	Do you or any member of this household use **Cell phones**?	Yes…1 No….2	
H6.34	Do you or any member of this household have **Personal computer**?	Yes…1 No….2	
H6.35	Do you or any member of this household have **bank account**?	Yes…1 No….2	
H6.36	Do you or any member of this household own **cattle?**	Yes…1 No….2	
H6.37	Do you or any member of this household own **sheep?**	Yes…1 No….2	
H6.38	Do you or any member of this household own **goats?**	Yes…1 No….2	
H6.39	Do you or any member of this household own **pigs?**	Yes…1 No….2	
H6.40	Do you or any member of this household own **donkeys?**	Yes…1 No….2	

End time

THANK YOU VERY MUCH FOR YOUR RESPONSES

MODULE 1

INDIVIDUAL WHO *USED ANY HEALTH SERVICES* OTHER THAN FOR DELIVERIES OR INPATIENT CARE QUESTIONNAIRE 2008

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)

Health Care Financing and Benefit incidence study in Ghana

SECTION 1: IDENTIFICATION

U 1.1	FORM NUMBER	
U 1.2	RESPONDENT [THE INDIVIDUAL **(User of health service)**=1, CARETAKER=2]	1 / 2
U 1.3	HOUSEHOLD LOCATION RURAL/URBAN	RURAL...1 / URBAN...…….2
U 1.4	NAME COMMUNITY/VILLAGE/TOWN	
U 1.5	REGION	UPPER WEST……1 NORTHERN…….. 2 BRONG AHAFO……3 ASHANTI……4 GREATER ACCRA……5
U 1.6	DISTRICT	LAWRA……..1 WEST GONJA…….2 BEREKUM……..3 ATWIMA NWABIAGYA…….....4 KPESHIE……....5 DANGME WEST…….6
U 1.7	DATE OF INTERVIEW (DD/MM/YY)	
U 1.8	ENUMERATOR'S NAME/ INITIALS	
U 1.9	RESULT OF INTERVIEW, COMPLETE	1
	OTHER(SPECIFY)_____	2
U 1.10	EDITED BY SUPERVISOR (NAME) NAME_____DATE _____/_____/_____	

SECTION 2

SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF USER OF HEALTH SERVICES

No	Questions	Coding category	SKIP
U 2.1	Which code in H2.1 is the user of health service?		
U 2.2	What is user's ethnic background?	Dagare……1 Wala..……..2 Akan…….....3 Ga……4 Dangme…….....…….5 Dagomba.....6 Gonja.....7 Ewes…….8 Mamprusis……9 Other(specify)_____96	
U 2.3	What is user's current marital status?	Married…….……..……1 Never married…… ……..…..…2 Divorced……..…..…3 Widowed…….…..…4 Separated…… ……..……5 Living together……..6 Child ……7 Other (specify)_____ 96	
U 2.4	What is user's religion?	Traditional……..…..……..1 Christian……2 Muslim……..……3 Other (specify)_____96	

U 2.5 During the past month did (name) use any of the following:

U 2.6 Total cost of use

1 = Public hospital [**Specify name of hospital**]	10= Chemical seller without prescription
2 = Public clinic/Community Health Centre	11 = Community health worker
3 = Clinic at workplace	12 = Private Midwife
4 = Private General Practitioner/nurse	13 = Traditional birth attendant
5 = Private specialist	14 = Traditional Healer/herbalist
6 = Private hospital	15= Spiritualist
7 = Private Dentist	16=Drug Peddlers
8 = Private pharmacy shop	17 = Treated self with herbs/or left over drugs at home.
9 = Chemical seller with prescription	96 = Other [Specify]
	99= NA

IF NOT USED CODE 0

If used then record the number of visits, e.g. 1 for one visit, 2 for two visits and so on.

Use/cost	1	Specify Hospital /place you sought treatment	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Other Specify	Grand total
Number of use/visits																				
Total cost (indicate for all use except for the most recent use)																				

U 2.7 The most recently used informal care (write code in box (10 to 17 + 96)

U 2.8 The most recently used formal care (write code in box) (1-9 + 96)

SECTION 3 | | | | | | | |

A	MOST RECENTLY USED INFORMAL HEALTH CARE (including self treatment at home)		SKIP
U 3.1	Where did you go for the informal treatment for (NAME)?	Self treatment with orthodox medicines. ..1 Self treatment with herbs……..……..2 Traditional healer/spiritualist…….3 Chemical seller with prescription……...4 Chemical seller without prescription……..5 Pharmacy……6 Other(Specify)_____96 NA……99	
U 3.2	Did (NAME) have to pay for the treatment in cash (that is out-of-pocket)?	Yes…….....1 No……...……..……2 Don't Know……..88 NA……..……99	**If 2 skip to U 3.4**
U 3.3	How much in cash did (Name) or the household pay for treatment at this place? **(record in old cedis)**	Amount in □_____ Don't Know……..8888 NA……..……9999	
U 3.4	Did you make any in-kind payment for (Name) treatment?	Yes……..1 No……...……2 Don't Know……..88 NA……99	**If 2 or 88 skip to U 3.6**
U 3.5	What was the value of the in-kind payment? **(record in old cedis)**	Amount in □_____ Don't Know……..8888 NA……9999	
U 3.6	Why did (Name) or the household **not** have to pay for treatment at this place?	Service was offered free of charge ....1 Given drug on credit……...2 Other (Specify) _____96 NA……99	
U 3.7	Did you pay for transport to this place for (Name)?	Yes……..1 No……...……2 NA……99	**If 2 skip to U4.1 if applicable**
U 3.8	How much did (Name) pay? **(record in old cedis)**	Amount in □_____ Don't Know……..8888 NA……9999	
END INTERVIEW HERE IF NO FORMAL CARE WAS SOUGHT FOR [NAME]			

SECTION 4

	MOST RECENTLY USED FORMAL CARE		
U 4.1	**(If person used more than one provider, ask**) Where did (NAME) seek treatment from **most recently**?	Regional Hospital……..……..1 District Hospital…….2 Private hospital……...3 Health Centre…….....4 Public Clinic……..…..5 Private clinic……..……..6 CHPS compound……....7 Other (specify)……96 NA…….. 99	
U 4.2	Why was (NAME) taken there instead of other facility (**main reason**)?	Nearness…….…… …..1 Quick service……..……..……...2 Less medical bill……..……..…….3 Less waiting time……..…..…….4 Good quality service……..…….5 Emergency/was taken there…….…6 Do not have to pay……7 Told to go there by doctor/nurse……...8 Told to go there by DMHIS……..9 Know care available will help me get better.10 Know I will be treated respectfully……11 Other(specify)_____ _____96	

U 4.3	Who took the decision?	Self……. 1 Spouse ……..…….……2 Household head…….……3 Relative/friends/Neighbours…….…. 4 Referral health worker……..…..5 Other(Specify)_____96 DK…….…… 88 NA……. 99	
U 4.4	How many days after illness was the decision taken?	Same day……..……..1 Next day…….……2 Third day……3 Fourth day…….……4 After fourth day……..……5 Other(Specify)_____96 DK……. 88 NA……. 99	
U 4.5	How serious was the illness/injury?	Very serious…….……..1 Serious…….…….. 2 Not serious…….……..…..3 Other(Specify)_____96 DK……8 8 NA……99	
U 4.6	Did (NAME) or household have to pay for the treatment in cash (that is out-of-	Yes…….. 1	**If 1 skip**

	pocket)?	No……...…… 2 DK…….. 88 NA 99	**U 4.8**
U 4.7	Why did (NAME) or the household **not** have to pay for treatment at this place? (**If 4.6 is 2**)	Service was offered free of charge….1 Covered by health insurance……..2 Exempted due to inability to pay……3 Other (specify)_____96 DK…….. 88 NA…….. 99	
U 4.8	How much did (NAME) or the household pay for this visit in cash (that is out-of-pocket)? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	
U 4.9	Did (NAME) or household have to make any unofficial payment to the service provider (that is under-the-table)?	Yes…….. 1 No……...…… 2 DK…….. 88 NA…….. 99	**If 2 or 88 skip to U 4.11**
U 4.10	How much did you pay (under-the-table payment)?	Amount in □_____ DK……8888 NA……9999	
U 4.11	How long did it take (NAME) to travel from home to this facility/provider? **TIME IN MINUTES**	Time in minutes_____ DK……8888 NA……9999	

U 4.12	Did (NAME) or household have to pay anything for transport to this facility/ provider?	Yes…….. 1 No……...…… 2 DK…….. 88 NA…….. 99	**If 2 skip to U 4.14**
U 4.13	How much did (NAME) or household pay for transport to this facility? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	
U 4.14	Were you or (NAME) accompanied by somebody or persons to the health facility?	Yes…… 1 No…….. 2	**If 2 skip to 4.17**
U 4.15	How much did the person(s) who accompanied you pay for transport?	Amount in □_____ DK……8888 NA……9999	
U 4.16	What would the lead (If more than one person accompanied) person have used the time for, if s/he/they had not accompanied you or NAME to the health facility (**main used**)?	On the farm……..……..1 Trading ……...…2 Resting…… …...3 At the office (government)……4 DK…… ……88 Other (Specify)……96 NA…… …….99	

	PAYMENT FOR SERVICES AT FORMAL HEALTH FACILITY (indicate if you receive this service and how much you paid)						
	Services	**U 4.17** During this Visit/inpatient admission; did (**Name**)/you receive any of the following services? Yes……1 No……2 DK…....88 NA...…..99	**U 4.18** Were you asked to pay for the service? **(If 2 skip to U 4.21)** Yes……..1 No…….2 DK……88 NA …....99	**U 4.19** How much did you pay for the service? **(record in old cedis)** Amount in ☐ DK…...8888 NA …..9999	**U 4.20 (For insured clients only)** Why did you pay for the service? Disease not covered by HI…….1 Drugs not covered by HI……..…2 Forgot to take my card…….3 Lost the HI card……..4 Other (specify)…..96 NA……..99 **(If provided skip to U4.22)**	**U 4.21** Why did you not pay for this service? Exempted …1 Covered by HI……2 Could not afford.....3 Covered by employer ….4 Other (specify) _ 96 NA ….....99	
	Consultation	☐	☐	☐_____	☐	☐	
	Laboratory	☐	☐	☐_____	☐	☐	
	X-ray	☐	☐	☐_____	☐	☐	
	Scan	☐	☐	☐_____	☐	☐	
	Other (specify)	☐	☐	☐_____	☐	☐	
	DRUGS (now lets talk about drugs)						
U 4.2	Did you get prescription for drugs?			Yes…….. 1			**If 2 skip**

2		No……..…… 2	**to U 4.30**
U 4.23	Did you **receive** all the prescribed drugs from this facility?	Yes, all drugs……...1 Some drugs…….2 None of the drugs……...3 Other (specify)_____96 DK…….. 88 NA…….. 99	**If 3 skip to U 4.28**
U 4.24	Did you have to pay for the prescribed drugs received?	Yes…….. 1 No……..…… 2	**If 2 skip to U 4.26**
U 4.25	How much **did** you pay for the drugs you received? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	**If amount is given skip to U 4.27**
U 4.26	Why did you not pay for the drugs you received? **(if person did not pay (pays nothing) i.e. 00**	Exempted ……1 Covered by HI scheme……2 Could not afford the drugs……..3 Covered by employer……..4 Other (Specify)……96 NA…… .99	
U 4.27	How **satisfied** were you that these drugs helped to improve your health?	Very satisfied…….……1 Satisfied…….…… 2 Somewhat satisfied…….3 Dissatisfied…….…… 4 Very	

		dissatisfied……5 DK……..……88 NA……..99	
U 4.28	If you **did not** get all drugs from the health facility, did you purchase the rest of your drugs elsewhere?	Yes……..1 No……...……2 NA……..99	**If 2 skip to U 4.30**
U 4.29	How much did you pay for the drugs elsewhere? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	
U 4.30	Did you **pay for transport** to buy drugs elsewhere?	Yes……..1 No……2 DK……..88 NA……..99	**If 2 skip to U 4.32**
U 4.31	How much did you pay for transport to get to this place? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	
U 4.32	Did you or (NAME) have to pay for supplies (i.e. gauze, syringe, plaster, disinfectants, etc) either in the facility or outside the facility?	Yes……..1 No……2 DK……88 NA……99	**If 2 skip to U4.34**
U 4.33	How much did you or (Name) pay for the supplies?	Amount in □_____ DK……8888	

		NA……9999	
U 4.34	Did you have to pay for **special food** which contributes to the treatment of (NAME) illness?	Yes…….. 1 No……...…… 2 DK…….. 88 NA…….. 99	**If 2 or 88 skip to U 4.36**
U 4.35	If 4.34, is **1**, how much did you spend on this special food for (NAME) illness? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	
U 4.36	Is there any **other expenditure** related to the illness/injury of (NAME) that you have incurred?	Yes…….. 1 No……...…… 2 DK…….. 88 NA…….. 99	**If 2 or 88 skip to U 4.38**
U 4.37	If 4.36, is **1**, how much was this? **(record in old cedis)**	Amount in □_____ DK……8888 NA……9999	

	REFERRALS		
U 4.38	Were you referred to go to another facility?	Yes……..1 No……...……2 NA……..99	**If 2 skip to U 4.46**
U 4.39	Did you go to the referral point?	Yes……..1 No……...……2 NA……..99	**If 2 skip to U 4.43**
U 4.40	Did you pay at the point of referral for treatment?	Yes……..1 No……...2 NA……..99	**If 2 skip to U 4.42**
U 4.41	How much did you have to pay at this referral point?	Amount in □_____ DK……8888 NA……9999	**If amount provided skip to U4.44**
U 4.42	Why did you **not** pay at the point of referral?	Service was offered free of charge….1 Covered by health insurance……..2 Exempted due to inability to pay……3 Other (specify)_____96 DK……..88 NA……..99	
U 4.43	What was the reason for not going to the referral point?	Do not have money……1 Distance too far……..2 Condition became better…….3 Do not like the referred place…….4 Other (specify)_____ 96 NA……99	
U 4.44	Did you and your household have enough cash in the home to pay your bill?	Yes……..1 No……...2 NA……..99	**If 1 skip to U 4.46**
U 4.45	If U 4.44 is 2, how did you and your household get money to pay for this (**main source**)?	Sold agricultural produce……...1 Sold assets(household tools)……..2 Took money from savings (Banks)…3 Took money from Susu collector**.....**4 Borrowed from friend or relative…...5 Borrowed from money lender……6 Received a gift……...7 Paid bill in instalments……...8 Bill left unpaid……...9 Other (specify)_____96 NA……99	
	QUALITY OF CARE		
U 4.46	How do you rank the	Very good……..…….1	

	attitude of health providers?	Good ……2 Satisfactory……..3 Fair……..……....4 Poor…….5 Other (Specify)_____ 96 DK…….88 NA……	
U 4.47	How satisfied were you with the **cleanliness** at the health facility?	Very satisfied…….……1 Satisfied…….……2 Somewhat satisfied……3 Dissatisfied…….……4 Very dissatisfied…….……5 DK…….……88 NA……..99	
U 4.48	How satisfied were you that you were treated with respect and dignity by the facility staff?	Very satisfied…….……1 Satisfied…….……2 Somewhat satisfied……3 Dissatisfied……4 Very dissatisfied……5 DK…….……88 NA……..99	
U 4.49	Will you visit the health facility again?	Yes……..1 No……..……2 NA……..99	**If 2 skip to U 4.51**
U 4.50	If **U 4.49 is 1,** what will be the **main reason** that will make you visit this facility again?	Good attitude of health staff……1 Cleanliness of the facility……2 Prompt care/treatment…….…….3 Easy access to doctor/nurse……4 Other (specify)_____96 NA……..____99	**If ANY skip to D 3.48**
U 4.51	If **4.49** is **2**, what is the **main reason** why you will not visit this facility again?	Staff were rude/poor manner…….....1 Waiting time too long……..2 Drugs were not available…….3 Services were too expensive……4 Lack of privacy……5 Staff did not explain treatment…….6 Facility was not clean……...7 Did not get to see a Doctor……...8 No injection given……....9 Other (specify)_____96 NA……...99	
U 4.52	How satisfied were you with the overall quality of care received there?	Very satisfied…….……1 Satisfied…….……2 Somewhat satisfied……3	**If 4.52 is 1 or 2 END Interview**

		Dissatisfied……4 Very dissatisfied……5 DK……88 NA……99	
U 4.53	Why were you **not fully satisfied** with the care provided? (**Ask if 4.52 is 3, 4. or 5**) MULTIPLE RESPONSES ALLOWED	Staff were rude/poor manner…….....1 Waiting time too long……..2 Drugs were not available…….3 Services were too expensive……4 Lack of privacy……5 Staff did not explain treatment…….6 Facility was not clean……...7 Did not get to see a Doctor……...8 No injection given……....9 Other (specify)_____96 NA……..99	

THANK YOU FOR YOUR TIME

MODULE 2

INDIVIDUAL (HOSPITALISED) LEVEL QUESTIONNAIRE 2008

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)

Health Care Financing and Benefit incidence study in Ghana

SECTION 1

IDENTIFICATION

P1.1	FORM NUMBER							
P1.2	RESPONDENT (THE INDIVIDUAL **(Person Hospitalised or Admitted)** =1, CARETAKER=2)				1		2	
P1.3	HOUSEHOLD LOCATION RURAL/URBAN				RURAL..		URBAN...2	
P1.4	NAME COMMUNITY/VILLAGE/TOWN							
P1.5	REGION	UPPER WEST……...……1 NORTHERN…. …….. 2 BRONG AHAFO……3 ASHANTI……4 GREATER ACCRA……5						
P1.6	DISTRICT	LAWRA……..1 WEST GONJA…..……...2 BEREKUM…….3 ATWIMA NWABIAGYA.....…....4 KPESHIE……....5 DANGME WEST…..……..6						
P1.7	DATE OF INTERVIEW (DD/MM/YY)							
P1.8	ENUMERATOR'S NAME/ INITIALS							
P1.9	RESULT OF INTERVIEW, COMPLETE						1	
	OTHER(SPECIFY)_____						2	
P1.10	EDITED BY SUPERVISOR (NAME) NAME_____DATE _____/_____/_____							

SECTION 2

SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT

No	Questions	Coding category	SKIP
P 2.1	Which code in H2.1 is the person hospitalised/admitted?		
P 2.2	What is the ethnic background of the person hospitalised/admitted?	Dagare……1 Wala……2 Akan……3 Ga……4 Dangme……5 Dagomba……6 Gonja……7 Ewes……8 Mamprusis……9 Other(specify)_____96	
P 2.3	What is the current marital status of the person hospitalised/admitted?	Married……1 Never married……2 Divorced……3 Widowed……4 Separated……5 Child……6 Other (specify)_____ 96	
P 2.4	What is the religion of the person hospitalised/admitted?	Traditional……1 Christian……2 Muslim……3 Other (specify)_____96	

SECTION 3 | | | | | | | |

HOSPITALISATION WITHIN THE PAST ONE YEAR

No	Questions	Coding category	Skip
P 3.1	For what **main** sickness were you hospitalized within the past one year?	Malaria…..……..…….....….....1 ARI……...…….....2 Diarrhoea...…….....3 Skin disease....…….....…...……...4 Other (specify)_____96 DK…..……..88	
P 3.2	In which health facility were you hospitalized for (NAME OF AILMENT) within the past one year?	Regional Hospital……...……1 District Hospital……..….....2 Health Centre……..……...3 Public Clinic……...4 Private clinic……...5 CHPS compound……6 DK…..……..88 Other (specify).....……96	
P 3.3	In the past year, that is since [July 2007) how many different times has <u>name</u>/you been admitted to a hospital/clinic for one night or more?	Write the number of admissions ☐☐	
P 3.4	I would like to ask some questions about the most recent stay in hospital/clinic for one night or more. Which hospital/clinic was … admitted to?	Name of hospital/clinic here.	
P 3.5	Who took the decision?	Self ……1 Spouse. ……..…….……2 Household head…….…….3 Relative/friends/Neighbours…..……..4 Referral health worker…….....5 Other(Specify)_____96 DK……88	
P 3.6	Did you have to pay transport to this facility?	Yes……...1 No……...……2 DK……...88	**If 2 or 88 skip to 3.8**
P 3.7	If 3.6 is 1, how much did you pay for transport to this facility?	Amount in □_____ DK……8888 NA……9999	
P 3.8	How many nights were you admitted?		

				☐☐			
P 3.9	Were you detained after discharge because you were unable to pay for services rendered?			Yes……..……..……...1 No…….……..……2			**If 2 skip to 3.11**
P 3.10	How many nights were you detained after discharge because you were unable to pay for services rendered?			☐☐			
	PAYMENT FOR SERVICES AT FORMAL HEALTH FACILITY (indicate if you receive this service and how much you paid)						
	Services	**P 3.11** During this visit/inpatient admission, did (NAME) /you receive any of the following services? Yes….1 No……..2 DK……88 **If 2 go to next**	**P 3.12** Were you asked to pay for the service? Yes….1 No…..2 DK…88 **(If 2 skip to P 3.15)**	**P 3.13** How much did you pay for the service? **(record in old cedis)** Amount in ☐……. DK……...88 NA……...99	**P 3.14** **(For insured clients only)** Why did you pay for the service? Disease not covered by HI……....1 Drugs not covered by HI……..…2 Forgot to take my card……..….3 Other (specify)…….96 NA…….99 **(If provided skip to P 3.16)**	**P 3.15** Why did you not pay for this service? Exempted …..1 Covered by HI…….2 Could not afford……...3 Other___96 NA……..99	
	Consultation	☐	☐	☐_____	☐_____	☐	
	Laboratory	☐	☐	☐_____	☐_____	☐	
	X-ray						

		☐	☐	☐_____	☐_____	☐	
	Scan	☐	☐	☐_____	☐_____	☐	
	Hospitalisation /admission	☐	☐	☐_____	☐_____	☐	
	Other (specify)	☐	☐	☐_____	☐_____	☐	
	DRUGS (now lets talk about drugs)						
P 3.16	Did you get prescription for drugs?	Yes……... 1 No……...…… 2					**If 2 skip to 3.22**
P 3.17	Did you receive all the prescribed drugs from this facility?	Yes all drugs……1 Some drugs……..2 None of the drugs……3 Other (specify)_____96 NA……..……99					**If 2 or 3 skip to 3.20**
P 3.18	How much did you pay for the drugs you received? **(record in old cedis)**	Amount in ☐_____ DK……8888 NA……9999					
P 3.19	How **satisfied** were you that these drugs helped to improve your health?	Very satisfied……..……1 Satisfied……..……….2 Somewhat satisfied…….3 Dissatisfied……..……….4 Very dissatisfied…….……5 DK……..…….88					

		NA……..99	
P 3.20	If you **did not get all drugs** from the health facility, did you purchase the rest of your drugs elsewhere?	Yes……... 1 No……..……. 2 NA……..99	**If 2 skip to 3.24**
P 3.21	How much did you pay for the drugs elsewhere? **(record in old cedis)**	Amount in □_____ DK…….8888 NA…….9999	
P 3.22	Did you pay for transport to go elsewhere for the drugs?	Yes……... 1 No……..……. 2	**If 2 skip to 3.24**
P 3.23	How much did you **pay for transport** to get to this place? **(record in old cedis)**	Amount in □_____ DK…….8888 NA…….9999	
P 3.24	Were you or (Name) accompanied by somebody to the health facility?	Yes…… …..1 No……..…… …2	**If 2 skip 3.27**
P 3.25	How much did the person who accompanied you pay for transport?	Amount in □_____ DK…….8888 NA…….9999	
P 3.26	What would the person have used the time for, if s/he had not accompanied you to the health facility?	On the farm……..……....1 Trading ……2 Resting…… … 3 At the office (government)……..4 Other (Specify)…….…….96 DK…….88	

		NA…… .99	
P 3.27	Did you have to pay for **special food** which contributes to the treatment of (NAME) illness?	Yes……... 1 No……...……. 2 NA……9 9	**If 2 skip to 3.29**
P 3.28	How much did you spend on these for (NAME) illness? **(record in old cedis)**	Amount in □_____ Covered by Health Insurance……1 DK…….888 8 NA……999 9	
P 3.29	Is there any **other** expenditure related to the illness of (NAME) that you have incurred?	Yes…….. 1 No……...……2 DK……88 NA……99	**If 2 skip to 3.31**
P 3.30	How much was this? **(record in old cedis)**	Amount in □_____ DK…….888 8 NA……999 9	
	SOURCE OF MONEY TO PAY BILLS		
P 3. 31	Did you and your household have enough cash in the home to pay your bill?	Yes…… …..1 No……. ..2 NA…… ..99	**If 1 skip to P 3.33**
P 3.32	If P 3.31 is 2, how did you and your household get money to pay for this (**main source**)?	Sold agricultural produce……...1 Sold assets(household tools)……..2 Took money from savings (Banks)…3 Took money from Susu collector.....4 Borrowed from friend or relative…...5 Borrowed from money	

		lender……6 Received a gift……...7 Paid bill in instalments……...8 Bill left unpaid……...9 Other (specify)_____96 NA……99	
	QUALITY OF SERVICE AT FACILITY		
P 3.33	What was your **main reason** for choosing this health facility?	Nearness……..…… ….1 Quick service……..…….…..2 Less medical bill……..……..….3 Less waiting time……..…..…….4 Good quality service……..…….5 Emergency/was taken there……6 Do not have to pay……7 Told to go there by doctor/nurse……...8 Told to go there by DMHIS……..9 Know care available will help me get better…… ……...10 Know I will be treated respectfully…11 Othe ____96	
Now I want to ask you about hospital services. Please tell me how satisfied you are with the following aspects of the hospital service. Rate your satisfaction using a five point scale where one is very satisfied and five is very dissatisfied.			
P 3.34	How **satisfied** are you with **services** given by this facility?	Very satisfied……..…… …….1 Satisfied……..…	

		…….2 Somewhat satisfied…….3 Dissatisfied……..… ……4 Very dissatisfied…….…… ……5 DK……. …….88	
P 3.35	How **satisfied** were you with the **cleanliness** at the health facility?	Very satisfied…….…… …….1 Satisfied……..… …….2 Somewhat satisfied……. 3 Dissatisfied……..… ……4 Very dissatisfied…….…… ……5 DK……. …….88	
P 3.36	How **satisfied** were you that you were **treated with respect and dignity** by the facility staff?	Very satisfied…….…… …….1 Satisfied……..… …….2 Somewhat satisfied……. 3 Dissatisfied……..… ……4 Very dissatisfied…….…… ……5 DK……. …….88	
P 3.37	How do you **rank** the attitude of health providers?	Very satisfied…….……	

		…….1 Satisfied……..… …….2 Somewhat satisfied……. 3 Dissatisfied……..… ……4 Very dissatisfied…….…… ……5 DK……. …….88	
P 3.38	How **satisfied** were you that you received **medical attention as soon as possible**, i.e. without having to wait unnecessarily?	Very satisfied…….…… …….1 Satisfied……..… ……..2 Somewhat satisfied……. 3 Dissatisfied……..… ……4 Very dissatisfied…….…… ……5 DK……. …….88	
P 3.39	How **satisfied** were you that these drugs helped to improve your health?	Very satisfied…….…… …….1 Satisfied……..… …….2 Somewhat satisfied……. 3 Dissatisfied……..… ……4 Very dissatisfied…….…… ……5 DK……. …….88	

P 3.40	Would you visit this health facility **again** for hospitalization?	Yes ……1 No……2	**If 1 skip to 3.42**
P 3.41	What is the **main reason** why you will **not visit** this facility again?	Staff were rude/poor manner…….....1 Waiting time too long……..2 Drugs were not available…….3 Services were too expensive……4 Lack of privacy……5 Staff did not explain treatment…….6 Facility was not clean……...7 Did not get to see a Doctor……...8 No injection given……....9 Other (specify)_____96 NA……...99	
P 3.42	How **satisfied** were you with the **overall quality** of care received there?	Very satisfied…….1 Satisfied……..2 Somewhat satisfied…….3 Dissatisfied……..4 Very	

		dissatisfied……..…… ……5 DK…….. ……88	
P 3.43	Why were you **not fully satisfied** with the care provided? (**Ask if 3.42 is 3, 4. or 5**) MULTIPLE RESPONSES ALLOWED	Staff were rude/poor manner……...1 Waiting time too long……2 Drugs were not available……3 Services were too expensive……..4 Lack of privacy…… …..5 Staff did not explain treatment……6 Facility was not clean……7 Did not get to see a Doctor…….....8 No injection given……...9 Other (specify)_____ ____96 NA…… ……..99	

THANK YOU VERY MUCH FOR YOUR TIME.

MODULE 3

INDIVIDUAL (PREGNANCY/DELIVERY) LEVEL QUESTIONNAIRE 2008

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)

Health Care Financing and Benefit incidence study in Ghana

SECTION 1: IDENTIFICATION

D 1.1	FORM NUMBER							
D 1.2	RESPONDENT (PREGNANT …….1, DELIVERED….2)				1		2	
D 1.3	HOUSEHOLD LOCATION RURAL/URBAN				RURAL... 1		URBAN...……. 2	
D 1.4	NAME COMMUNITY/VILLAGE/TOWN							
D 1.5	REGION	UPPER WEST……1 NORTHERN……..2 BRONG AHAFO……3 ASHANTI……4 GREATER ACCRA……5						
D 1.6	DISTRICT	LAWRA……..1 WEST GONJA…..……2 BEREKUM…….3 ATWIMA NWABIAGYA…….……....4 KPESHIE……....5 DANGME WEST…..……..6						
D 1.7	DATE OF INTERVIEW (DD/MM/YY)							
D 1.8	ENUMERATOR'S NAME/ INITIALS							

D 1.9	RESULT OF INTERVIEW, COMPLETE	1
	OTHER(SPECIFY)_____ ___	2
D 1.10	EDITED BY SUPERVISOR (NAME) NAME_____DATE _____/_____/_____	

SECTION 2
SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT

No	Questions	Coding category	SKIP
D 2.1	Which code in H2.1 is the respondent (person pregnant or recently delivered)?	☐☐	
D 2.2	What is the ethnic background of person pregnant or recently delivered?	Dagare……1 Wala……2 Akan……3 Ga……4 Dangme……5 Dagomba……6 Gonja……7 Ewes……8 Mamprusis……9 Other(specify)_____96	
D 2.3	What is the current marital status of person pregnant or recently delivered?	Married……1 Never married……2 Divorced……3 Widowed……4 Separated……5 Other (specify)_____ 96	
D 2.4	What is the religion of person pregnant or recently delivered?	Traditional……1 Christian……2 Muslim……3 Other (specify)_____96	

SECTION 3
DELIVERY WITHIN THE PAST ONE YEAR AND CURRENTLY PREGNANT

No	Questions	Coding category	Codes/skip
D 3.1	How many children have you **ever** given birth to (both dead and alive; excluding miscarriages and stillbirths)?	Number of children	**If 00 skip to D3.4**
D 3.2	How many of your children are alive?	Children alive	
D 3.3	How old is your most	Days ☐☐	

	recent child?	Weeks ☐☐ Months ☐☐ Years ☐☐ DK ...……..……...88 NA ...……99	
D 3.4	Did/Do you have complications with this pregnancy?	Yes ……1 No…….….2	
D 3.5	How old is this pregnancy (**for pregnant women only**)?	WEEKS ☐☐ MONTHS ☐☐ NA……..99	
	ANC SERVICES		
D 3.6	Did/do you receive ANC during the/this pregnancy?	Yes ……...……1 No……...……2	**If 1 skip to D 3.8**
D 3.7	If no, why did/are you not attend(ing) ANC?	Long distance to facility…....1 Attitude of health providers…2 No money……...3 Not Sick……..4 Not facing complications……5 Other(Specify)_____96 DK…….…….....88 NA……99	**IF ANY skip to D 3.27**
D 3.8	How old was/is the pregnancy when you began attending ANC?	DAYS ☐☐ WEEKS ☐☐ MONTHS ☐☐ DK…….88 NA ……99	
D 3.9	How many ANC visits did you make before delivery/How many ANC visits have you made so far?	Number of visits NA…….99	
D 3.10	Where did/do you obtain the ANC services?	Regional Gov't Hosp…….1 District Hosp…….....2 Health Centre…….3 Private clinic…….....4 Private hospital…….....5 Private maternity home…….....6 CHPS Compound……...7 At home…….…….....8 Other (Specify)_____96	

D 3.11	What is/was your main reason for choosing this health facility for your ANC services?	Nearness……..……1 Quick service……..2 Less medical bill…….3 Less waiting time……4 Quality service……5 No other option……..6 Other(Specify)_____96 NA…….99	
D 3.12	Who did/do you primarily consult for ANC?	A doctor……..……1 A nurse…….....2 A midwife……...3 A trained TBA……4 An Untrained TBA…….5 Other(Specify)_____96 DK…….……..88 NA……99	
D 3.13	Are/Were you always **physically examined** by the person who attended to you on each visit?	Yes……..1 No……....2 NA……..99	
	PAYMENT FOR ANC SERVICE		
D 3.14	Are/Were you asked to **pay** for this ANC service?	Yes……..1 No……2 NA……..99	**If 2 skip to D 3.17**
D 3.15	How much did you pay for ANC service	Amount in □_____ NA……9999 DK……8888	
D 3.16	From which **source** did you get money to settle your bill?	Sold agricultural produce……...1 Sold assets(household tools)……..2 Took money from savings (Banks)3 Took money from Susu collector...4 Borrowed from friend or relative...5 Borrowed from money lender……6 Received a gift……...7 Paid bill in instalments……...8 Bill left unpaid……...9 Other (specify)_____96 NA……99	**If ANY skip to D 3.18**
D 3.17	Why were you **not**	ANC is free……1	

	asked to pay for ANC?	Covered by NHIS……2 Exempted due inability to pay.3 Other(Specify)_____96 NA……99	
	TRANSPORTATION FOR ANC SERVICE		
D 3.18	How far is the **distance** from your home to the health facility where you obtain/obtained ANC?	Less than 1km……...1 1 to less than 3 km…….....2 3 km……....3 More than 3km…….……...4 Other (Specify)_____ 96 DK……..……...88 NA……99	
D 3.19	Do/Did you have to **pay for transportation** on each ANC visit?	Yes……..1 No……..2 NA……99	**If 2 skip to D 3.22**
D 3.20	If yes, **how much** did/do you have to pay on each visit as transport expenses?	Amount in □_____ DK……8888 NA……9999	
D 3.21	Is transportation **cost a hindrance** to you seeking ANC?	Yes……1 No……..2 NA……99	
	DRUGS		
D 3.22	Are/Were some drugs prescribed for you on each visit?	Yes ……..……..……1 No……..……...2 NA……99	**If 2 skip to D 3.26**
D 3.23	How much did you pay in total for drugs provided at this facility **(if yes in D3.22 but had no drugs at facility record 00 for amount paid)**	Amount in □_____ DK……..8888 NA……..9999	
D 3.24	Did/Do you have to buy drugs outside this facility in addition to what was obtained from the health facility?	Yes ……..……..……1 No……..……..……...2 NA……99	**If 2 skip to D 3.26**
D 3.25	How much did you pay in total for drugs outside this facility for ANC?	Amount in □_____ DK……..8888	

		NA……..9999	
	DELIVERY (Do not ask women who are currently pregnant)		
D 3.26	**Where** did you go to **give birth** to your child?	Regional Gov't Hosp……1 District Hosp…….....2 Health Centre…….3 Private clinic…….....4 Private hospital…….....5 Private maternity home…….....6 CHPS Compound……...7 At home…….....8 Other (Specify)_____96 NA……99	**If 8 skip to D 3.28**
D 3.27	If at the health facility, who assisted you to deliver?	A medical doctor…….....1 A nurse……..……...2 A midwife…….....3 A community health nurse…….4 A health professional…..……5 Other(Specify)_____ 96 DK……...88 NA……99	
D 3.28	Were there complications during delivery?	Yes……..……...1 No……..…….…… .2	
D 3.29	Was your baby delivered normally or surgically (by caesarean delivery)?	Normally……..…….....1 Surgical…….....2 Other (Specify)_____ 96 NA……99	
	PAYMENT FOR DELIVERY (Do not ask women who are currently pregnant)		
D 3.30	Did you have to pay for the delivery services?	Yes……..……...1 No……..…….……..2 NA……99	**If 2 skip to D 3.32**
D 3.31	How much did you and your family pay for the delivery? **(record in old cedis)**	Amount in □_____ DK…….. 8888 NA…….. 9999	
D 3.32	Why did you and your family **not** pay for the delivery services? **(ask if 3.30 is No=2)**	Delivery is free……...1 Delivered by a relative/friend….2 Covered by the NHIS…….3 Paid by a Philanthropist…….4 Other (specify)_____96 NA……99	

D 3.33	Did you have to make any **under-the-table** payment for the delivery at the facility?	Yes……..……...1 No……..…….……..2 DK……88 NA……99	**If 2 or 88 skip to D 3.35**
D 3.34	How much was this **under-the-table** payment? **(record in old cedis)**	Amount in □_____ DK…….. 8888 NA…….. 9999	
D 3.35	Did you have to make any in-kind payment for the delivery (**applicable to all places of birth** D 3.26)?	Yes……..……...1 No……..…….……..2 DK……88 NA……99	**If 2 or 88 skip to D 3.37**
D 3.36	What was the value of the in-kind payment	Amount in □_____ DK…….. 8888 NA…….. 9999	
D 3.37	From which source did you and your family get money to pay these bills? (**Only ask if 3.30 is Yes=1 or 3.33 is Yes=1 or 3.35 is Yes=1)** **MULTIPLE RESPONSES ALLOWED**	Sold agricultural produce……...1 Sold assets(household tools)……..2 Took money from savings (Banks)3 Took money from Susu collector...4 Borrowed from friend or relative…5 Borrowed from money lender……6 Received a gift……...7 Paid bill in instalments……...8 Bill left unpaid……...9 Other (specify)_____96 NA……99	**If ANY skip to D 3.36**
	POSTNATAL SERVICE (**Do not ask mothers who are pregnant or whose babies are less than six weeks)**		
D 3.38	After delivery, did you go back to the facility or any other facility at six weeks for **Postnatal care**?	Yes……..…….....1 No……..……...2 NA……99	**If 1 skip to D 3.40**
D 3.39	Why did you **not** go back to the facility or any other facility for postnatal care?	Staff were rude/poor manner…....1 Waiting time too long……2 Drugs were not available……..….3 Services were too expensive……..4 Lack of privacy……..5 Staff did not explain treatment…..6 Facility was not clean……7 Did not get to see a Doctor……8	**If any skip to D 3.44**

		No injection given……9 Other (specify)_____96 NA……..……...99	
D 3.40	If **1** in **D3.38**, did **you pay** for the postnatal services?	Yes……..……...1 No……..…….…….....2 NA…...……99	**If 2 skip to D 3.42**
D 3.41	How much did **you pay for the postnatal services**?	Amount in □_____ DK……8888 NA …….....9999	
D 3.42	Why did you **not** pay for the postnatal services?	Post natal service is free...….....1 Covered by the NHIS……2 Paid by a Philanthropist……3 Other (specify)_____ 96 NA……....99	
D 3.43	How much did you pay as **transport cost** to seek postnatal care?	Amount in □_____ DK……8888 NA …….....9999	
	QUALITY OF CARE (ANC) **(ASK ALL: both currently pregnant and women who have given birth)**		
D 3.44	How **satisfied** are you with services given by this facility?	Very satisfied…….……1 Satisfied……..2 Somewhat satisfied…….3 Dissatisfied…….……4 Very dissatisfied……5 Other(specify)_____ 96 DK…….……88 NA……..99	
D 3.45	How satisfied were you with the **cleanliness** at the health facility?	Very satisfied……1 Satisfied……2 Somewhat satisfied…….3 Dissatisfied…….……4 Very dissatisfied…….……5 Other(specify)_____ 96 DK…….……88 NA……..99	
D 3.46	How do you **rank the attitude** of health providers?	Very good……...……...1 Good……..2 Satisfactory……..……..3 Fair…….…….....4 Poor……..5 Other (Specify)_____96	

		DK……88 NA……99	
D 3.47	Would **you visit** this health facility **again** for ANC services?	Yes ……1 No…….…….2 NA……..99	**If 2 skip to D 3.49**
D 3.48	If **yes in D 3.47**, what will be the **main reason** that will make you visit this facility for **ANC** services again?	Good attitude of health staff……1 Cleanliness of the facility……2 Prompt care/treatment…….3 Easy access to doctor/nurse…….4 Other (specify)_____96 NA……..99	**If ANY skip to D 3.50**
D 3.49	What is the **main reason** why you **will not visit** this facility again for ANC services?	Staff were rude/poor manner…....1 Waiting time too long……2 Drugs were not available……..….3 Services were too expensive……4 Lack of privacy……..5 Staff did not explain treatment…..6 Facility was not clean……7 Did not get to see a Doctor……8 No injection given…….9 Other (specify)_____96 NA…….……...99	
	QUALITY OF CARE (DELIVERY SERVICES) (Do not ask women who are currently pregnant)		
D 3.50	How **satisfied** are you with services given to you during your delivery by this facility?	Very satisfied…..……..….1 Satisfied……..……...2 Somewhat satisfied……...3 Dissatisfied…….…….…….…4 Very dissatisfied…….……..…5 Other(specify)_____96 DK…….…..….88 NA……99	
D 3.51	How satisfied were you with the **cleanliness** at the health facility?	Very satisfied…….1 Satisfied…….2 Somewhat satisfied……3 Dissatisfied…….……4 Very dissatisfied…….……....5 Other(specify)_____ 96 DK…….……88 NA…….....99	
D 3.52	How do you **rank the attitude** of health providers during delivery at this facility?	Very good……...……...1 Good……..2 Satisfactory……..3 Fair…….…….....4 Poor…….……..5	

		Other (Specify)_____96 NA……99	
D 3.53	Would **you visit** this health facility **again** for delivery?	Yes ……1 No…….…….2 NA……99	**If 2 skip to D 3.55**
D 3.54	If **yes in D 3.53**, what will be the **main reason** that will make you visit this facility for **delivery** services again?	Nearness…….……..…1 Quick service……..……..2 Less medical bill……..…….3 Less waiting time…..……..4 Good quality service……..……..5 Emergency/was taken there…….6 Do not have to pay……7 Told to go there by doctor/nurse...8 Told to go there by DMHIS……..9 Know care available will help me get better…….....10 Know I will be treated respectfully……..11 Other(specify)_____96 NA……99	
D 3.55	What is the **main reason** why you **will not visit** this facility **again** for delivery services?	Staff were rude/poor manner…....1 Waiting time too long……2 Drugs were not available……..….3 Services were too expensive……..4 Lack of privacy……..5 Staff did not explain treatment…..6 Facility was not clean……7 Did not get to see a Doctor……8 No injection given…….9 Other (specify)_____96 NA…….……...99	
QUALITY OF CARE (POST NATAL SERVICES) (**Do not ask mothers who are pregnant or whose babies are less than six weeks)**			
D 3.56	How **satisfied** are you with services given by this facility during post natal services?	Very satisfied……1 Satisfied…….2 Somewhat satisfied…….3 Dissatisfied…….……4 Very dissatisfied…….……5 Other(specify)_____96 DK……88 NA…….99	
D 3.57	How satisfied were you with the **cleanliness** at the health facility?	Very satisfied……1 Satisfied…….2 Somewhat satisfied……...3 Dissatisfied…….……..4	

		Very dissatisfied……..5 Other(specify)_____96 DK……88 NA……..99	
D 3.58	How do you **rank the attitude** of health providers during post natal services?	Very good……...……...1 Good……..2 Satisfactory……..……..3 Fair…….…….....4 Poor…….……..5 Other (Specify)_____96 NA……99	
D 3.59	Would **you visit** this health facility **again** for postnatal services?	Yes ……1 No…….…….2 NA……99	**If 2 skip to D 3.61**
D 3.60	If **yes in D 3.57**, what will be the **main reason** that will make you visit this facility for **postnatal** services again?	Nearness…….……1 Quick service……..……..2 Less medical bill……..……3 Less waiting time……..4 Good quality service……..……..5 Do not have to pay……6 Told to go there by doctor/nurse...7 Told to go there by DMHIS……..8 Know care available will help me get better…….....9 Know I will be treated respectfully.10 Other(specify)_____96 NA……99	**If ANY <u>END</u> interview**
D 3.61	What is the **main reason** why you **will not visit** this facility again for post natal services?	Staff were rude/poor manner…....1 Waiting time too long……2 Drugs were not available……..….3 Services were too expensive……..4 Lack of privacy……..5 Staff did not explain treatment…..6 Facility was not clean……7 Did not get to see a Doctor……8 No injection given…….9 Other (specify)_____96 NA…….……...99	

THANK YOU VERY MUCH FOR YOUR TIME

Appendix 4:Focus group discussion guide with community members

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)

Categories of respondents

- Urban/rural
- Distance to health facilities (far/close to health facility)
- Migrant workers
- Formal/informal workers

A. Economic factors

1. What are some of the main ailments in this community? Where do you seek care if you have any of these health problems? (Probe for all possible sources of care)
2. How much does it cost at the different health care providers you have mentioned? Which of these is the most expensive? Why do you say so?
3. Where do you usually get funds to pay for health care? Probe for membership of DMHIS, self employed, formal worker, assets liquidity, social network, time of ailment and perception of service worth.

B. Geographical factors

4. Where are health providers located in this community? (Probe for all health care providers in the community (Chemical sellers, private clinics and maternity homes, TBAs, Public health providers, outreach points of public providers)
5. What do you think about the distance to each of these health care providers? How do you get to these healthcare facilities? (Probe for walking, going by transport and ease or otherwise of getting to these facilities, opportunity cost of travelling to health facility.
6. How much does it cost to get to these health care facilities, how much is the transport cost. What do you think about transport cost?
7. Is transport available anytime to get to health facilities? What about accessibility of the road?

C. Organizational factors

8. What do you think about the type of services provided at health facilities within your community? (Probe for public health care facilities and other facilities).
9. When you visit these health facilities are all the services you need often provided? If not what services are often not provided. (Probe for public and private providers)
10. You mentioned that the main diseases in your communities are …. Are you able to get all treatment for these ailments in the health care facilities in your community? (Probe for public and private health facilities)
11. What do you think of the opening hours of the health facilities you use in your community? Are the opening hours appropriate for you, if not please explain why. If yes please give reasons.

12. When you visit health facilities are you able to identify where to get the service you need? If not what do you do? How are you able to identify how to get to where you need to get service?
13. What do you think abut time spent with provider and continuity of service? What about confidentiality?

D. Behavioural factors

14. What do you think about the attitude of providers in health care facilities? (Probe for public health facilities and private provider's age, sex, ethnicity, language, religion of providers? Do these affect you as a client? Why did you say so?
15. Do you trust that when you visit these providers your ailment will be cured? If yes please explain if no please give reasons for your response.

E. Information

16. Do you know exactly when the health facilities are opened? Do you know how much you are likely to pay for services at the health facilities (Probe for both public and private facilities)
17. Are you informed about outreach services by health care providers? How convenient are these arrangements to you?

Migrants

1. Are you a migrant worker in this community? Where are you from?
2. Why are you in this community? What work do you do?
3. Do you speak the language of the people in this community?
4. Where do you go to seek acre when sick?
5. Are you able to communicate with health providers about your sickness? Are they also able to communicate with you adequately? Please give reasons for your response.
6. Do you think your being a migrant affect your seeking health care? How does it affect you? Probe. time spent in seeking care, effect on wages and security of job

Formal /informal workers

1. How does your being an informal /formal worker affect your seeking health care when sick? Please give reasons for your response.

THANK YOU VERY MUCH FOR YOUR TIME.

Appendix 5: In-depth interview guide with health care providers

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)
2008

BENEFIT INCIDENCE STUDY

1. Name

2. Qualification

3. Number of years in current position

4. Name of facility, District and Region.

A. Financing of health care (Accountant)

1. Has your institution been accredited to provide services to clients of the DMHIS? If **no**, why have you not been accredited and what then happens to the clients/card bearers who are members of the DMHIS?
2. What do you think should be the best way to finance health care? What problems confront those that pay directly (cash and carry)?
3. Has there been any change in your finances with the introduction of the NHIS? What accounts for these changes (**if any**)?

B. Drugs availability (Pharmacist)

4. What do you think about the essential drug list that the NHIS provides (adequacy)?
5. Do you always have the essential drugs as prescribed by the NHIS in your stores for patients?
6. If **no**, what do you think is the reason behind this situation? How often do you restock the facility with these drugs?

C. Equipment availability/ waiting time (Administrator/nurses with close contact with clients)

7. What do you think about the equipments (beds, ambulance, fridges, etc) that you have in this facility (quality and quantity)?
8. What was the average waiting time per patient at this facility *before the introduction* of the NHIS?
9. Has it changed with the introduction of the scheme?
10. Is there any difference in the waiting time between the insured/card bearers and the uninsured patients who visit this facility?
11. What is the average waiting time for the insured and the non- insured who visited this facility? What accounts for the difference?
12. What do you think should be the waiting time before a patient sees a doctor?

D. Staff attitude (staff with close contact with clients)

13. What is the attitude of health staffs towards the insured and the uninsured?

14. Is there a difference in the attitude of health staff towards the insured and uninsured? Why the differences if there are any?
15. What is your perception about **work load** in your health facility?

E. Financing of health facility (Accountant)

16. Has the introduction of the NHIS help in the finances of this facility? How?
17. Do you know about the exemption under the NHIS?
18. How is this different from the exemption under the cash and carry payment?
19. What is your opinion of the exemption package under the NHIS?
20. Have you exempted clients under the cash and carry system in the past year?
21. Are there any guidelines to help you identify who should be exempted? What are these guidelines?
22. Are these guidelines national, regional or from other places?

F. Reimbursement (Accountant)

23. Have you received any funds for reimbursement of insured clients? If you exempted clients under the cash and carry have you been reimbursed fully?
24. What do you think about the reimbursement process under the NHIS and cash and carry for exempted clients?
25. How long does it take for you to get reimbursement from the NHIS and cash and carry exempted clients.
26. Do you think the current process and timing should be maintain or changed? Has there ever been a delay in reimbursement?
27. Does a delay have any impact on your ability as a facility to continue providing service to clients? How does the delay affect your ability as a facility to continue providing service to clients?
28. What are some of the challenges of implementing the NHIS policy? What suggestions do you have for solving some of the challenges/problems you have mentioned?

G. Conditions of service (general staff)

33. Please tell me about your condition of service. What is your perception about what pertains now? (Probe remuneration, staff development, staff moral)

THANK YOU FOR YOUR TIME.

Appendix 6:Client narrative guide

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD) 2008

1. Name
2. Age
3. Sex
4. Marital status
5. Educational background
6. Name of community
7. Number of children
8. Hello Can I have a chat with you on your visit to this health facility?
9. What is your reason for this visit to the facility? (Probe ailment, decision to visit health facility)
10. When did you arrive here? How did you come here? (Probe for distance, transport use and cost of transport.
11. How would you describe the services you received in this facility?

    THANK YOU FOR YOUR TIME

Appendix 7:Information sheet and consent forms for all respondents

INFORMATION SHEET FOR FOCUS GROUP DISCUSSIONS

In case of reply the number and date of this Letter should be quoted.

Research & Dev. Division
Ghana Health Service
P. O. Box MB 190
Accra

Tel: +233-21-679323/681109
Fax + 233-21-226739

Email: bgarshong@yahoo.com

My Ref. :

Your Ref. No.

Date…….

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES

Information Sheet

My name is…….. (Name of research assistant collecting survey data). I work with the Research and development Division of the Ghana Health Service. We are conducting a study on how community members pay for health care services and find out who uses health care and why.

Purpose of research: We are here today to have a group discussion on some of the issues about health in your community. We will discuss issues about health services and the cost of this to you and your household. We will ask about your perception of those who provide health care service to your community. The information you give us will assist us in understanding what hinders or facilitates your use of health care services. Your contribution is valuable to us. Feel free to speak your mind and make suggestions.

Risks and discomforts: There may be a slight risk that some questions may be personal. We do not expect this to happen. However should that happen and, you do not feel comfortable to share any personal or confidential information with us, you can refuse to respond to those questions and this will not affect you in any way. The discussion will take about one hour.

Benefits: This may not benefit you directly but your participation is likely to help us find out more about how to plan our health care services in the country as a whole.

Confidentiality: Your name will not be mentioned. The information you give to us is confidential, and no one else except me and the research team members will have access to the information. However, I cannot guarantee total confidentiality as FGD participants may disclose what was discussed during the discussion outside the meeting but I will ask participants to respect each others' confidentiality.

Incentives: Your participation in this study is voluntary and we will not be paying you for this interview. Thank you for listening to us.

Who to contact:

Bertha Garshong, Research and Dev.Division, GHS, Box MB190 Accra. Tel- 021-681109

INFORMED CONSENT TEMPLATE FOR HOUSEHOLD HEADS AND MEMBERS

In case of reply the number and date of this Letter should be quoted.

My Ref. :

Your Ref. No.

Research & Dev. Division
Ghana Health Service
P. O. Box MB 190
Accra

Tel: +233-21-679323/681109
Fax + 233-21-226739

Email: bgarshong@yahoo.com

Date…….

INFORMATION SHEET FOR HOUSEHOLD HEADS AND MEMBERS

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES

Information Sheet

My name is…….. name of research assistant collecting survey data. I work with the Research and Development Division of the Ghana Health Service. We are conducting a study on how community members pay for health care services and find out who uses health care and why.

Purpose of research : We are here today to have an interview with you on some of the issues about health in your community. We will also ask you your use of any health services and the cost of this to you and your household. We will ask about your perception of those who provide health care service to your community. The information you give us will assist us in understanding what hinders or facilitates your use of health care services. Your contribution is valuable to us. Feel free to speak your mind and make suggestions.

Risks and discomforts: There may be a slight risk that some questions may be personal. We do not expect this to happen. However should that happen and, you do not feel comfortable to share any personal or confidential information with us, you can refuse to respond to those questions. The discussion will take about one hour.

Benefits: This may not benefit you directly but your participation is likely to help us find out more about how to plan our health care services in the country as a whole.

Confidentiality: Your name will not be mentioned. The information you give to us is confidential, and no one else except me and the research team members will have access to the information.

Incentives: Your participation in this study is voluntary and we will not be paying you for this interview. Thank you for listening to us.

Who to contact:

Bertha Garshong
Research & Development Div.
Ghana Health Service
Box MB190 Accra.
Tel- 021-681109

INFORMED CONSENT TEMPLATE FOR HEALTH CARE PROVIDERS

In case of reply the number and date of this Letter should be quoted.

My Ref. :

Your Ref. No.

Research & Dev. Division
Ghana Health Service
P. O. Box MB 190
Accra

Tel: +233-21-679323/681109
Fax + 233-21-226739

Email: bgarshong@yahoo.com

Date……..

INFORMATION SHEET FOR HEALTH CARE PROVIDERS

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES

Information Sheet

My name is…….. name of research assistant collecting survey data. I work with the Research and Development Division of the Ghana Health Service. We are conducting a study on how community members pay for health care services and find out who uses health care and why.

Purpose of research : We are here today to have an interview with you on some of the issues concerning your work. We will also ask about any issue that affect your provision of service to the community. The information you give us will assist us in understanding what hinders or facilitates your provision of health care services. Your contribution is valuable to us. Feel free to speak your mind and make suggestions.

Risks and discomforts: There may be a slight risk that some questions may be personal. We do not expect this to happen. However should that happen and, you do not feel comfortable to share any personal or confidential information with us, you can refuse to respond to those questions. The interview will take about one hour.

Benefits: This may not benefit you directly but your participation is likely to help us find out more about how to plan our health care services in the country as a whole.

Confidentiality: Your name will not be mentioned. The information you give to us is confidential, and no one else except me and the research team members will have access to the information.

Incentives: Your participation in this study is voluntary and we will not be paying you for this interview. Thank you for listening to us.

Who to contact:

Bertha Garshong
Research & Development Div.
Ghana Health Service
Box MB190 Accra.
Tel- 021-681109

CERTIFICATE OF CONSENT FOR INDEPTH INTERVIEWS WITH HOSPITAL IN CHARGES

STRATEGIES FOR HEALTH INSURANCE FOR EQUITY IN LESS DEVELOPED COUNTRIES (SHIELD)

I have been invited to take part in the research. I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have. Questions have been answered to my satisfaction. I consent voluntarily to be a participant in this study and understand that I have the right to withdraw from the interview at any time without in any way affecting my work in anyway.

Print Name of Subject Date and Signature of Subject

_____ _____

___/___/___ (dd/mm/yy)

_____ _____

___/___/___ (dd/mm/yy)

Print Name of Researcher and Signature of /Research Assistant

_____ _____

___/___/___(dd/mm/yy)

CERTIFICATE OF CONSENT FOR QUALITATIVE STUDY
HOUSEHOLD HEADS

Strategies For Health Insurance For Equity In Less Developed Countries (SHIELD)

I have been invited to take part in the research. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked, have been answered to my satisfaction. I consent voluntarily to be a participant in this study and understand that I have the right to withdraw from the [interview] at any time without in any way affecting my medical care.)
Print Name of Subject Date and Signature of Subject

_____ _____
___/___/___ (dd/mm/yy)

If illiterate
Write the name of independent literate witness date and signature of witness
(if possible, this person should be selected by the participant and should have no connection to the research team)

_____ _____
___/___/___ (dd/mm/yy)
Print Name of Researcher/Moderator Date and Signature of
Researcher/Moderator

_____ _____
___/___/___ (dd/mm/yy

CERTIFICATE OF CONSENT FOR QUALITATIVE STUDY
CLIENT NARRATIVE

Strategies For Health Insurance For Equity In Less Developed Countries (SHIELD)

I have been invited to take part in the research. The foregoing information has been read to me. I have had the opportunity to ask questions about it and any questions I have asked, have been answered to my satisfaction. I consent voluntarily to be a participant in this study and understand that I have the right to withdraw from the [interview] at any time without in any way affecting my medical care.)

Print Name of Subject Date and Signature of Subject

_____ _____

___/___/___ (dd/mm/yy)

If illiterate

Write the name of independent literate witness date and signature of witness

(If possible, this person should be selected by the participant and should have no connection to the research team)

_____ _____

___/___/___ (dd/mm/yy)

Print Name of Researcher/Moderator Date and Signature of Researcher/Moderator

_____ _____

___/___/___(dd/mm/yy